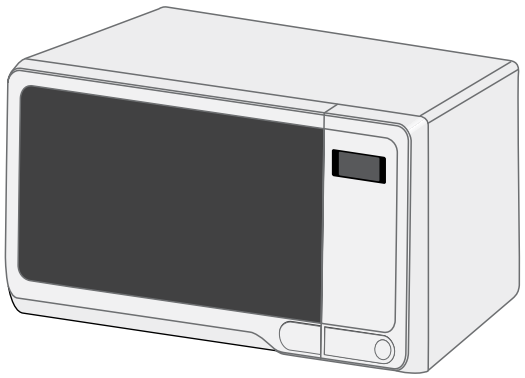
SAMSUNG

MICROWAVE OVEN

BASIC: MW73E-WB
MODEL: AMW83E-SB
MODEL CODE: AMW83E-SB/XAP

SERVICE Manual

MICROWAVE OVEN



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Refer to the service manual in the GSPN(see rear cover) for the more information.

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PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(a) Do not operate or allow the oven to be operated with the door open.

(b) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
(1) Interlock operation,
(2) proper door closing,
(3) seal and sealing surfaces (arcing, wear, and other damage),
(4) damage to or loosening of hinges and latches,
(5) evidence of dropping or abuse.

(c) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.

(d) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.

(e) A Microwave leakage check to verify compliance with the Federal performance standard should be performed on each oven prior to release to the owner.

1. Precaution

Follow these special safety precautions. Although the microwave oven is completely safe during ordinary use, repair work can be extremely hazardous due to possible exposure to microwave radiation, as well as potentially lethal high voltages and currents.

1-1 Safety precautions (⚠)

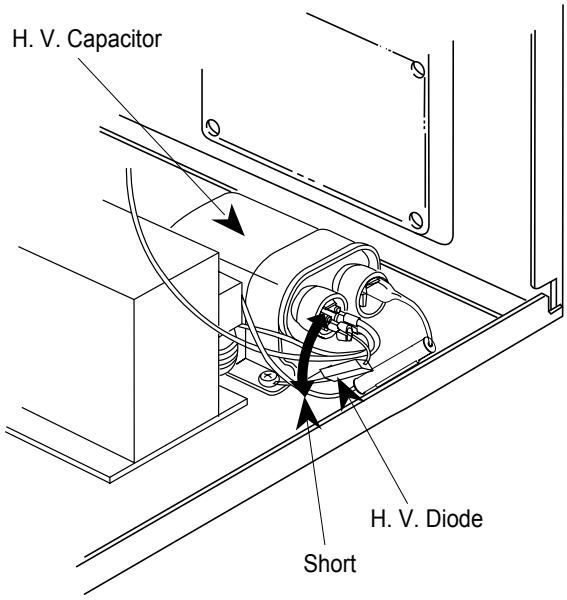
1. All repairs should be done in accordance with the procedures described in this manual. This product complies with Federal Performance Standard 21 CFR
2. Microwave emission check should be performed to prior to servicing if the oven is operative.
3. If the oven operates with the door open :Instruct the user not to operate the oven and contact the manufacturer and the center for devices and radiological health immediately.
4. Notify the Central Service Center if the microwave leakage exceeds 5 mW/cm2.
5. Check all grounds.
6. Do not power the MWO from a “2-prong” AC cord. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.
7. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.
8. Make sure that there are no cabinet openings through which people --particularly children--might insert objects and contact dangerous voltages. Examples: Lamp hole,ventilation slots.
9. Inform the manufacturer of any oven foundto have emission in excess of 5 mW/cm2 ,Make repairs to bring the unit into compliance at no cost to owner and try to determine cause. Instruct owner not to use oven until it has been brought into compliance.

   CENTRAL SERVICE CENTER
10. Service technicians should remove their watches while repairing an MWO.
11. To avoid any possible radiation hazard,replace parts in accordance with the wiring diagram. Also, use only the exact replacements for the following parts: Primary and secondary interlock switches, interlock monitor switch.
12. If the fuse is blown by the Interlock Monitor Switch: Replace all of the following at the same time: Primary, door sensing switch and power relay, as well as the Interlock Monitor Switch. The correct adjustment of these switches is described elsewhere in this manual. Make sure that the fuse has the correct rating for the particular model being repaired.
13. Design Alteration Warning: Use exact replacement parts only, i.e.,only those that are specified in thedrawings and parts lists of this manual. This is especially important for the Interlock switches, described above. Never alter or add to the mechanical or electrical design of the MWO. Any design changes or additions will void the manufacturer’s warranty. Always unplug the unit’s AC power cord from the AC power source before attempting to remove or reinstall any component or assembly.
14. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
15. Some semiconductor (“solid state”) devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs). Examples include integrated circuits and field-effect transistors. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground.
16. Always connect a test instrument’s ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument’s ground lead last.
17. When checking the continuity of the witches or transformer, always make sure that the power is OFF, and one of the lead wires is disconnected.
18. Components that are critical for safety are indicated in the circuit diagram by shading, ⚠ or ⚠ .
19. Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

    NOTE : Connect the oven to a 20A. When connecting the oven to a 15A,make sure that circuit breaker can operate.

1-2 Special High Voltage Precautions

1. High Voltage Warning Do not attempt to measure any of the high voltages --this includes the filament voltage of the magnetron. High voltage is present during any cook cycle. Before touching any components or wiring, always unplug the oven and discharge the high voltage capacitor (See Figure 1-1)
2. The high-voltage capacitor remains charged about 30 seconds after disconnection. Short the negative terminal of the high-voltage capacitor to to the oven chassis. (Use a screwdriver.)
3. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.



PRECAUTION

There exists HIGH VOLTAGE ELECTRICITY with high current capabilities in the circuits of the HIGH VOLTAGE TRANSFORMER secondary and filament terminals. It is extremely dangerous to work on or near these circuits with the oven energized.

DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

PRECAUTION

Servicemen should remove their watches whenever working close to or replacing the magnetron.

PRECAUTION

Never touch any circuit wiring with your hand nor with uninsulated tool during operation.

2. Specifications

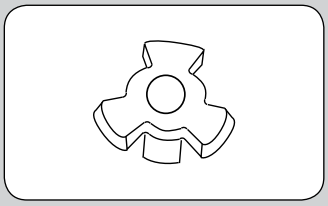
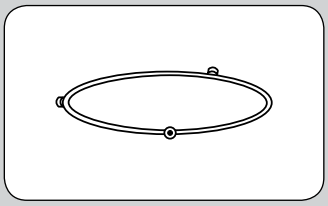
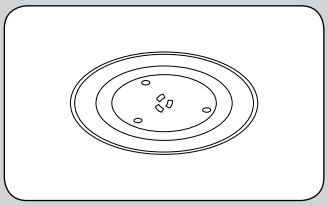
2-1 Features

Product Features
- 0.7cu.ft(20Liter)
- Membrane Control Method
- Match with Kitchen Furniture
- Super Power Defrost Algorithm

2-2 Table of Specifications

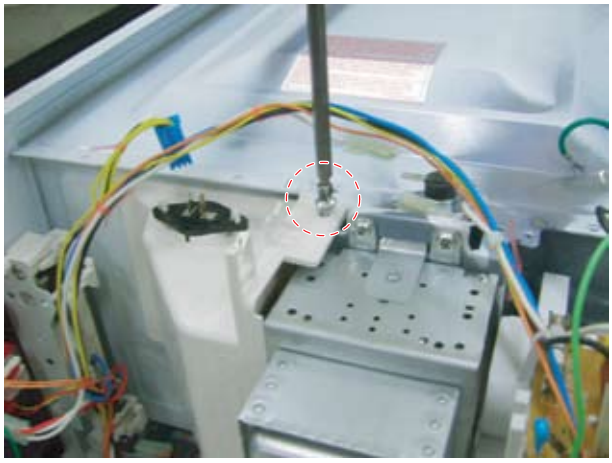
Items		Model	
		Model Basic	Model New
MODEL NAME		AMW83E-WB/XAP	AMW83E-SB/XAP
Power Source		230V ~ 50Hz AC	230V ~ 50Hz AC
Power consumption	Microwave	1150W	1150W
Output Power		100W / 800W (IEC-705)	100W / 800W (IEC-705)
Operating Frequency		2450MHz	2450MHz
Magnetron		OM75S(31)	OM75S(31)
Cooling Method		Cooling fan motor	Cooling fan motor
Dimensions (W x H x D)	Outside	489 x 275 x 361mm	489 x 275 x 361mm
	Oven cavity	306 x 211 x 320mm	306 x 211 x 320mm
Volume		20Liter	20Liter
Weight	Net	12.5Kg	12.5Kg
Export zone		Panama	Panama

2-3 Accessory

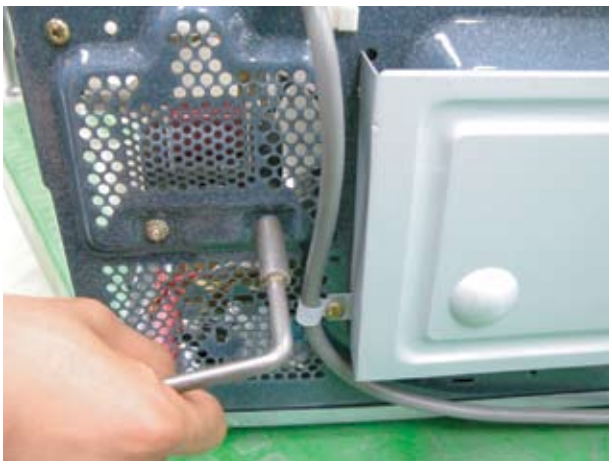
Item	Description	Code No.	Q'ty
	Coupler	DE67-00140A	1
	Assy-Guide Roller	DE97-00193B	1
	Tray-cooking	DE74-00027A	1

3-1 Disassembly of Magnetron, Motor Assembly and Lamp

Remove the magnetron including the shield case, permanent magnet, choke coils and capacitors (all of which are contained in one assembly)

Parts	Explanation Photo	Explanation
Magnetron, Motor Assembly and Lamp		**1.** Disconnect all lead wires from the magnetron and lamp.
		**2.** Remove a screw securing air cover.
		3. Remove the air cover.

3-1 Disassembly of Magnetron, Motor Assembly and Lamp

Parts	Explaination Photo	Explaination
Magnetron, Motor Assembly and Lamp		**4.** Remove screws securing the magnetron to the wave guide.
		5. Take out the magnetron very carefully.
		**6.** Remove two screws from the back panel. **7.** Take out the fan motor.

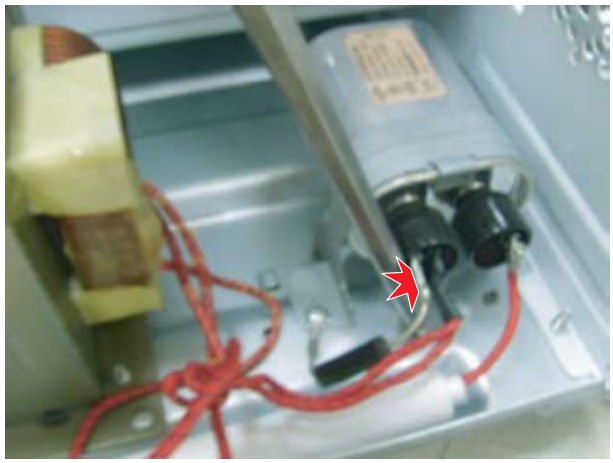
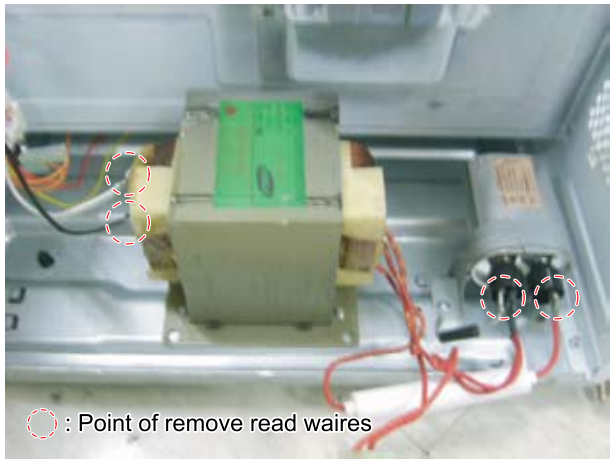
3-1 Disassembly of Magnetron, Motor Assembly and Lamp

Parts	Explaination Photo	Explaination
Magnetron, Motor Assembly and Lamp		**8.** Remove the oven lamp from hole of air cover.

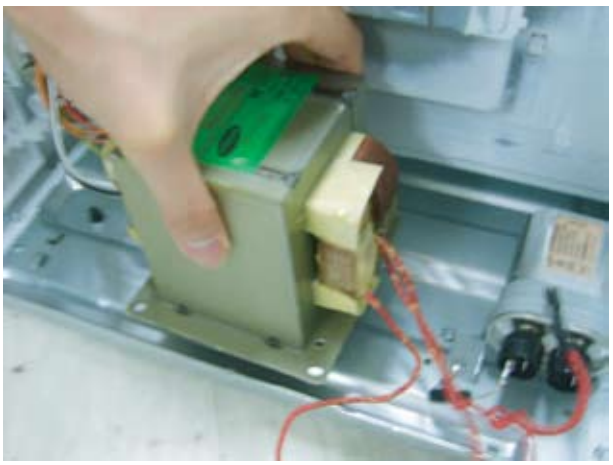
NOTE1: When removing the magnetron, make sure that its antenna does not hit any adjacent parts, or it may be damaged.

NOTE2: When replacing the magnetron, be sure to remount the magnetron gasket in the correct position and make sure the gasket is in good condition.

3-2 Replacement of High Voltage Trancefomer

Parts	Explaination Photo	Explaination
High Voltage Transformer		**1.** Discharge the high voltage capacitor.
		**2.** Disconnect all the leads.

3-2 Replacement of High Voltage Trancefomer

Parts	Explaination Photo	Explaination
High Voltage Transformer		**3.** Remove the mounting bolts.
		**4.** Replace the High Voltage Transformer **5.** After replace, reconnect the leads correctly and firmly.

⚠ PRECAUTION

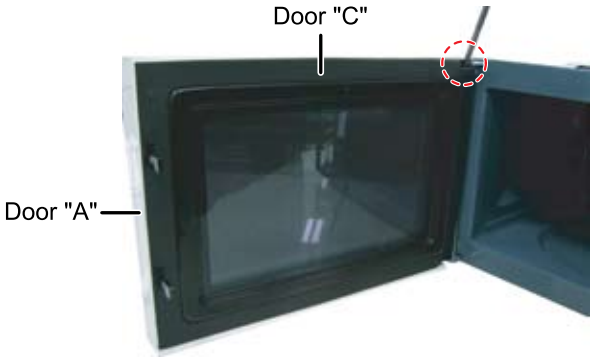
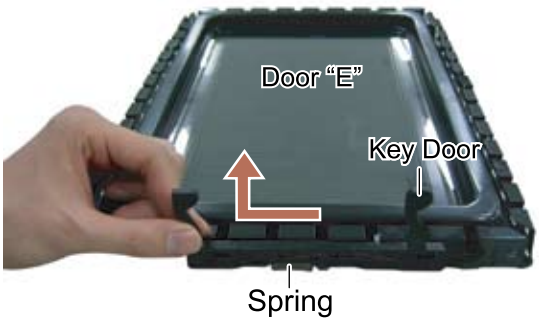
Servicemen should remove their watches whenever working close to or replacing the magnetron.

⚠ PRECAUTION

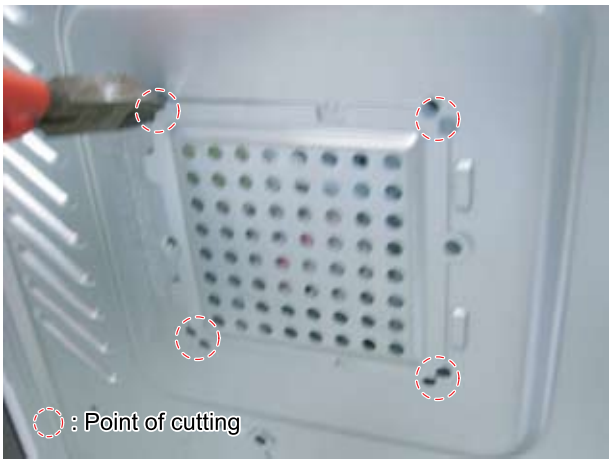
There exists HIGH VOLTAGE ELECTRICITY with high current capabilities in the circuits of the HIGHVOLTAGE TRANSFORMER secondary and filament terminals. It is extremely dangerous to work on or near these circuits with the oven energized.

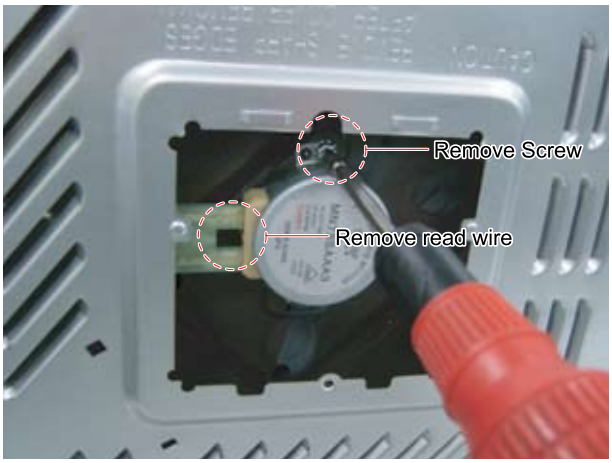
DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

3-3 Replacement of Door Assembly

Parts	Disassembly Photo	Explanation
Removal of Door “C”		Insert flat screwdriver into the gap between Door “A” and Door “C” to remove Door “C”. Be careful when handling Door “C” because it is fragile.Then remove the door assembly.
Removal of Door Assembly		Lift up the Door Assembly from Cavity.
Removal of Door “E”		Following the procedure as shown in the figure, insert and bend a thin metal plate between Door “E” and Door “A” until you hear the ‘tick’ sound. • Insertion depth of the thin metal plate should be 0.5mm or less.
Removal of Key Door & Spring		Remove pin hinge from Door “E” Detach spring from Door “E” and key door.

3-4 Replacement of Drive Motor

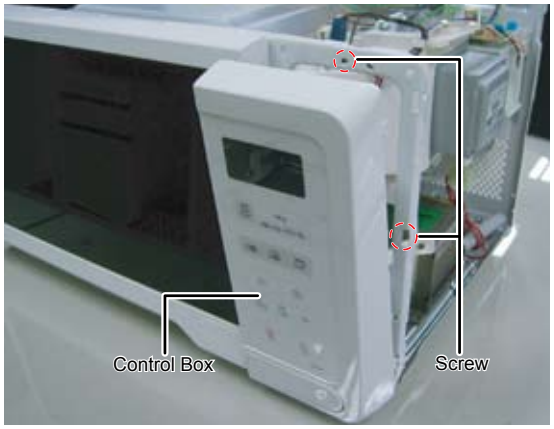
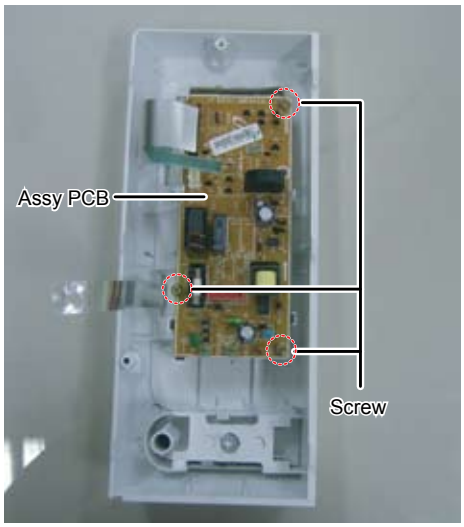
<table>
<tr><th>Parts</th><th>Explanation Photo</th><th>Explanation</th></tr>
<tr><td rowspan="2">Drive Motor</td><td> 
</td><td>1. Take out the glass tray, guide roller from oven cavity, disconnect power.
2. Remove turn table motor cover from case bottom.

CAUTION : Remove sharp edge after cover removal.</td></tr>
<tr><td> 
</td><td>3. Disconnect leads from motor.
4. Remove the screws securing motor to bottom of over cavity.</td></tr>
<tr><td rowspan="2">Drive Motor</td><td> </td><td>6. Lift out the motor.
5. When replacing the motor, be sure to remount it in the correct position.

NOTE : The shaft of motor should fit tip coupler.</td></tr>
<tr><td>COVER FIXING SCREW :
MATCHINE SCREW(6006-001170)</td><td>6. When reassemble a drive motor cover. give a turn in a 180° and fix with a screw.

NOTE : Bring the spare screw from service center.</td></tr>
</table>

3-5 Replacement of Control Circuit Board

Parts	Explaination Photo	Explaination
Removal of Control Box Assembly		**1.** Be sure to ground any static electric charge in your body and never touch the control circuit. **2.** Disconnect the connectors from the control circuit board. **3.** Remove screws securing the control box assembly. **4.** Remove the screw securing the ground tail of the keyboard.
Removal of Ass'y P.C.B Assembly		**1.** Pull the lever end of the plastic fastener and remove the Flexible Printed Circuit(FPC) of membrane panel. **2.** Remove screws securing the control circuit board. **3.** Lift up the control circuit board from the Ass'y control box. **4.** When reconnecting the FPC connector, make sure that the holes on the connector are properly engaged with the hooks on the Plastic Fastener.

4-1 Parts checking method

Parts	Photo	Good	No Good
Fuse		0.1 ~ 1 Ω	100 MΩ exceed
T.C.O		0.1 ~ 1 Ω	100 MΩ exceed
H.V Trans		1 ~ 9 Ω	100 MΩ exceed
Convection		100 ~ 990 Ω	100 MΩ exceed
Fan Motor		10 ~ 99 Ω	100 MΩ exceed
Grill Heater		10 ~ 99 Ω	100 MΩ exceed

4-2 Error Code Numbering Rule

1. ERROR CODE NUMBERING RULE is applied to a microwave oven and an oven.(CMO, OTR, Grill, Convection, Commercial etc.)
2. All sensors and devices have their own number. ex) Gas Sensor = 1, Temp. Sensor = 2, ...
3. Of each device, No.1 and No.2 refer to “Open Error” (not sensed) and “Short Error”, respectively.
4. This numbering rule has been applied to models to have been developed since January, 1, 2005. (But, GE or Customize model are excluded.)

E	-	1	1

DEVICE	ERROR CASE
0- Others	1- Open
1- Gas Sensor	2- Short
2- Temp. Sensor	•
3- Weight Sensor	•
4- Easy/PH Sensor	•
5- EEPROM	
•	
•	
•	

4-3 Error Code List

Gas Sensor

Error Code	Gas Sensor Error Case (E-1X)	Solution	Page
E-11	Open	Check Sensor part ,connection of sensor housing and PCB’s connector.	18 Page
E-12	Short		19 Page
E-13	T1 Max Time Error		20 Page
E-14	Dry Up / No Load	Insert food and restart.	

Temp Sensor

Error Code	Temp. Sensor Error Case (E-2X)	Solution	Page
E-21	Open	Check sensor part and connection of sensor housing and PCB’s connector.	18 Page
E-22	Short		19 Page
E-23	T1 Max Time Error (Preheating not completed)	Check heater.	27 Page
E-24	Over temperature error		30 Page
E-25	In case abnormal temperature is sensed at Micro Cook	Cool down set and restart.	30 Page
E-26	In case the temperature is not over the fixed AD in first 3 minutes after cooking by heater starts.	Check sensor and heater.	27 Page

Eeprom Error

Error Code	EEPROM Error Case (E-5X)	Solution	Page
E-51	Open (Sense Failure)	Replace EEPROM and restart.	25 Page
E-53	Read/Write Error		
E-54	Zero not to be set		

4. Troubleshooting

Weight Sensor

Error Code	Gas Sensor Error Case (E-1X)	Solution	Page
E-31	Open (When value of HEX is above “FF” for 5 seconds)	Check Sensor.	18 Page
E-32	Short		19 Page
E-33	In case the initial value of HEX is under “14” for 30 seconds while a weight sensor in operation.		22 Page
E-34	In case the initial value of K calculated by a weight sensor is above and under “±28” as value of HEX.		
E-35	In case the value of A is “-” as a weight sensor calculates.		
E-36	In case the door opens during sensor cooking.	Cancel the present mode and restart from the begining.	23 Page

Easy/Ph Sensor

Error Code	Easy/PH Sensor Error Case (E4)	Solution	Page
E-41	Open	Check Sensor.	18 Page
E-42	Short		19 Page
E-43	T1 Max Time Error		20 Page
E-44	Dry Up	Insert food and restart.	20 Page
E-45	Cooling Error (3minutes)	Remove moisture from sensor and restart.	23 Page
E-46	Primary Open Error(3minutes)	Check Sensor.	18 Page
E-47	The door opens during cooking	Cancel the present mode and restart from the begining.	23 Page

Humidity Sensor

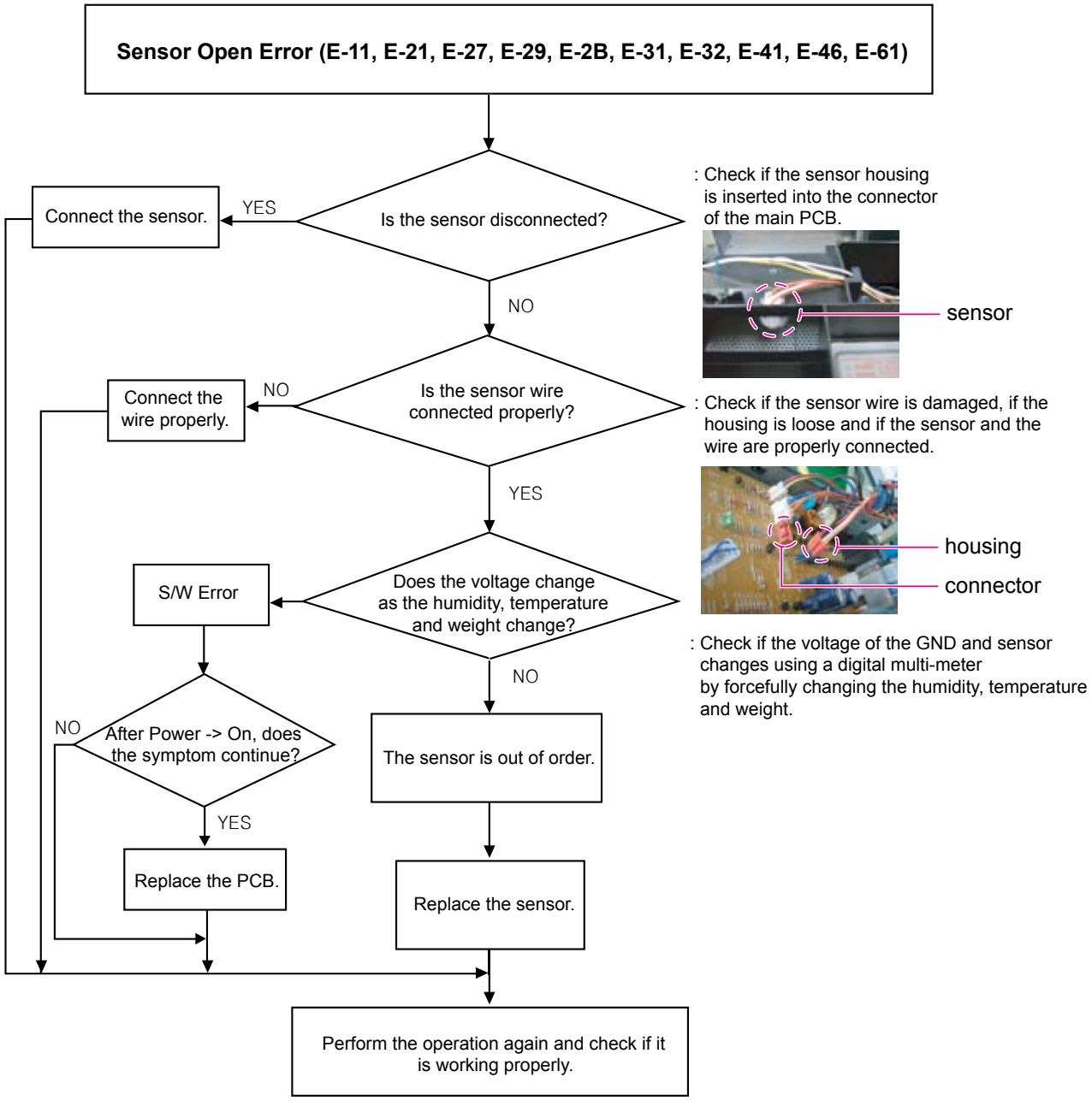
Error Code	Humidity Sensor Error Case (E-6X)	Solution	Page
E-61	Open	Check Sensor.	18 Page
E-62	Short		19 Page
E-63	T1 Max Time Error		20 Page

Others

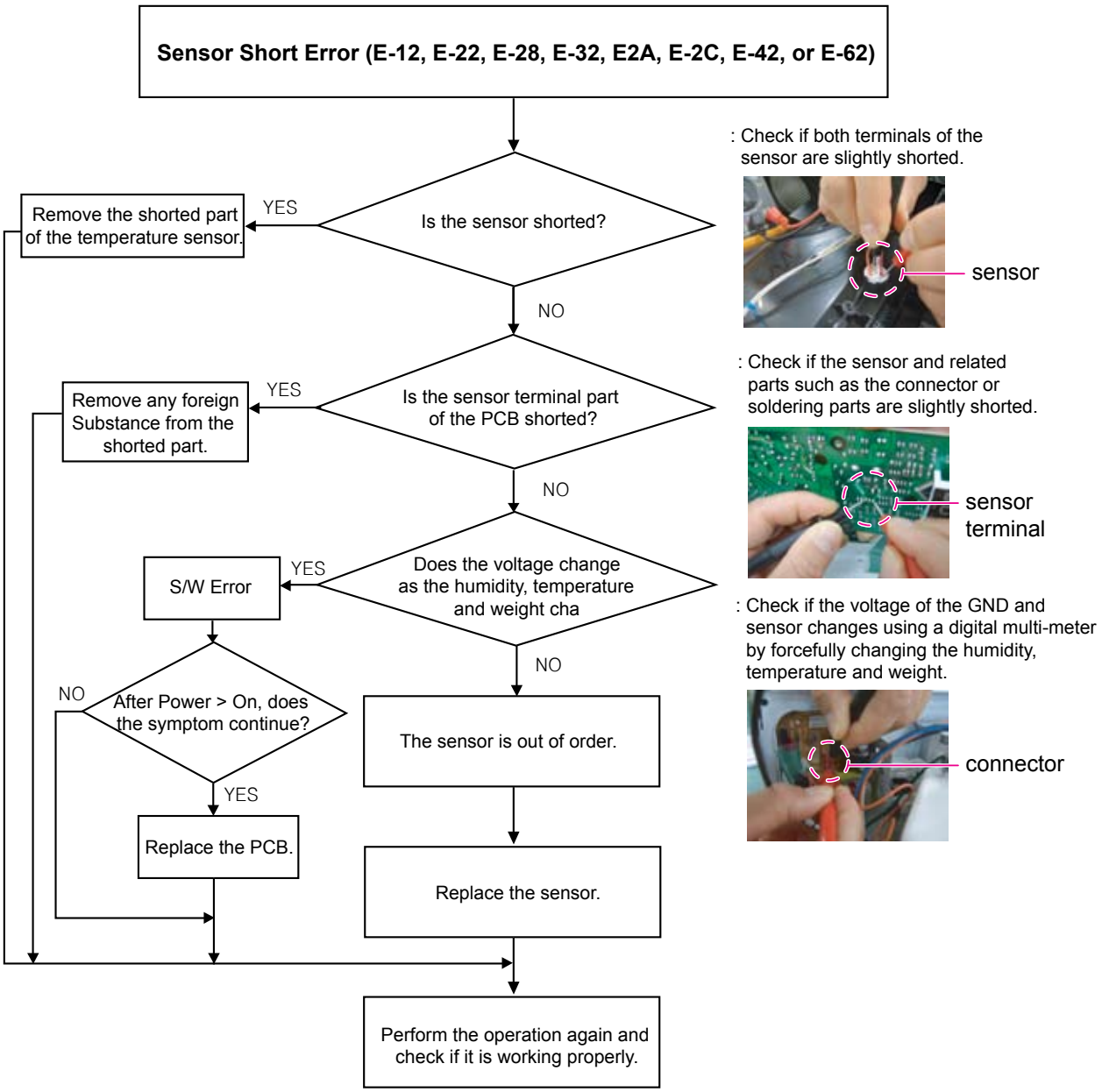
Error Code	Others (E-0X, Letter)	Solution	Page
-SE-	Key Short Error (10 seconds)	Turn off set and restart.	21 Page
E-02	Cooking Time Setting Over Error (MWO)	Check each mode’s setting time.	27 Page
E-03	Cooking Time Setting Over Error (Grill)		
E-04	Cooking Time Setting Over Error (Convection)		
E-05	Cooking Time Setting Over Error (Combination)		
E-06	It fails to sense that the swing heater has stopped for 20 seconds during cooking.	Check Swing heater’s motor and connector.	31 Page

4-4 Electrical Malfunction

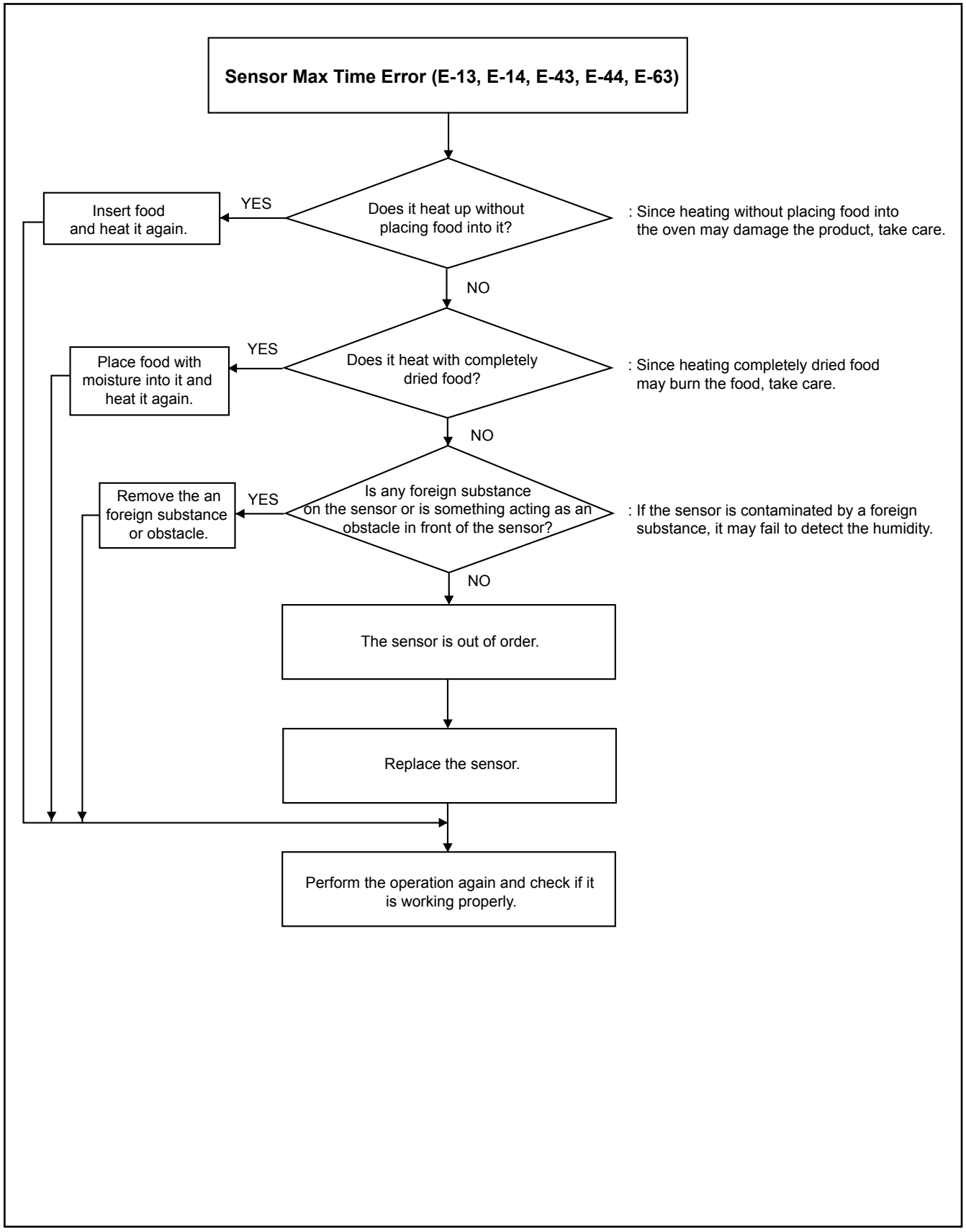
4-4-1 E-11, E-21, E-27, E-29, E-2B, E-31, E-32, E-41, E-46, E-61


Sensor Open Error (E-11, E-21, E-27, E-29, E-2B, E-31, E-32, E-41, E-46, E-61)
Is the sensor disconnected?
YES
Connect the sensor.
NO
Is the sensor wire connected properly?
NO
Connect the wire properly.
YES
Does the voltage change as the humidity, temperature and weight change?
S/W Error
NO
After Power -> On, does the symptom continue?
NO
YES
Replace the PCB.
The sensor is out of order.
Replace the sensor.
Perform the operation again and check if it is working properly.
: Check if the sensor housing is inserted into the connector of the main PCB.
sensor
: Check if the sensor wire is damaged, if the housing is loose and if the sensor and the wire are properly connected.
housing
connector
: Check if the voltage of the GND and sensor changes using a digital multi-meter by forcefully changing the humidity, temperature and weight.

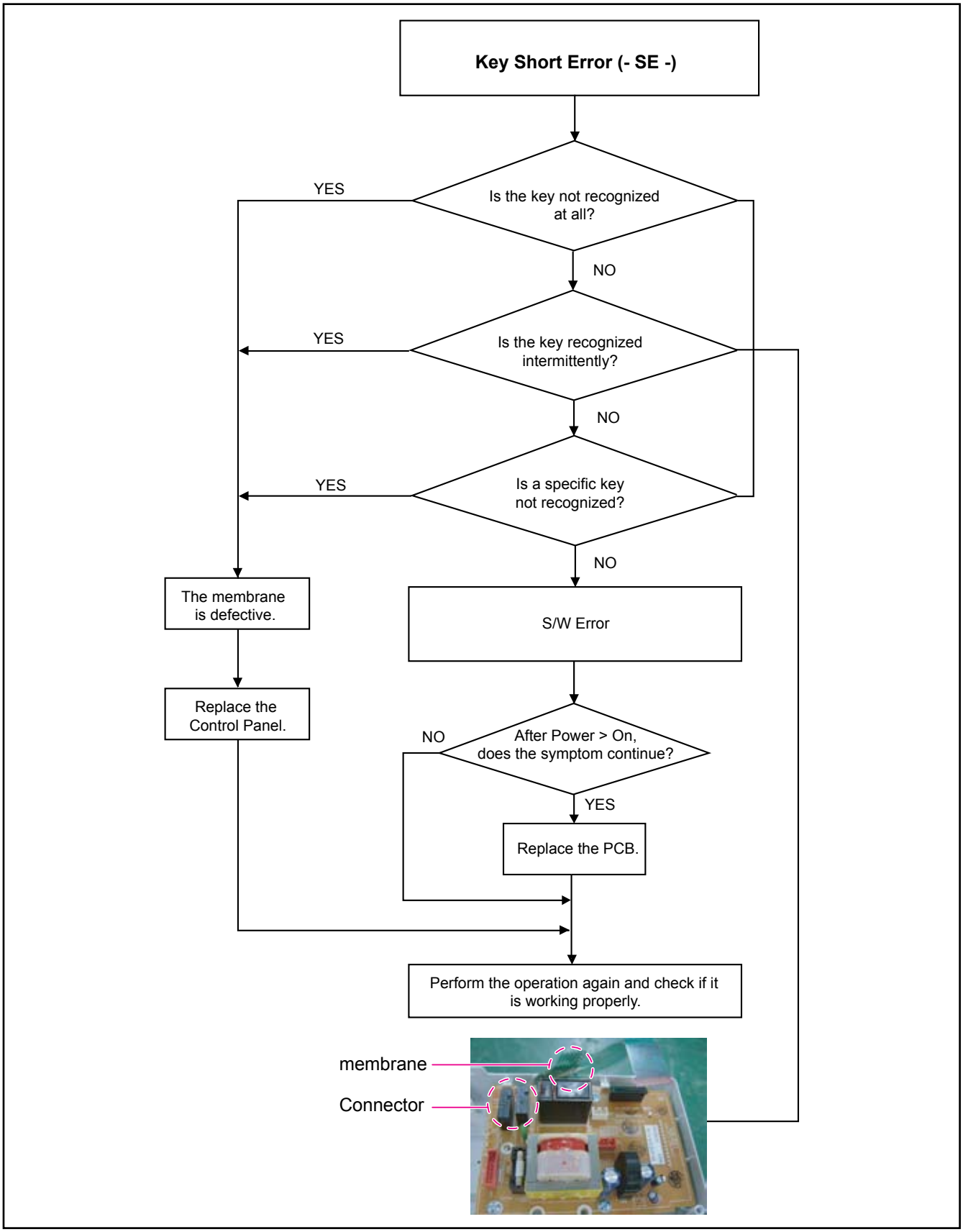
4-4-2 E-12, E-22, E-28, E-32, E2A, E-2C ,E-42, E-2C, E-42 or E-62


Sensor Short Error (E-12, E-22, E-28, E-32, E2A, E-2C, E-42, or E-62)
Is the sensor shorted?
YES
Remove the shorted part of the temperature sensor.
NO
Is the sensor terminal part of the PCB shorted?
YES
Remove any foreign Substance from the shorted part.
NO
Does the voltage change as the humidity, temperature and weight cha
YES
S/W Error
NO
After Power > On, does the symptom continue?
NO
YES
Replace the PCB.
The sensor is out of order.
Replace the sensor.
Perform the operation again and check if it is working properly.
: Check if both terminals of the sensor are slightly shorted.
sensor
: Check if the sensor and related parts such as the connector or soldering parts are slightly shorted.
sensor terminal
: Check if the voltage of the GND and sensor changes using a digital multi-meter by forcefully changing the humidity, temperature and weight.
connector

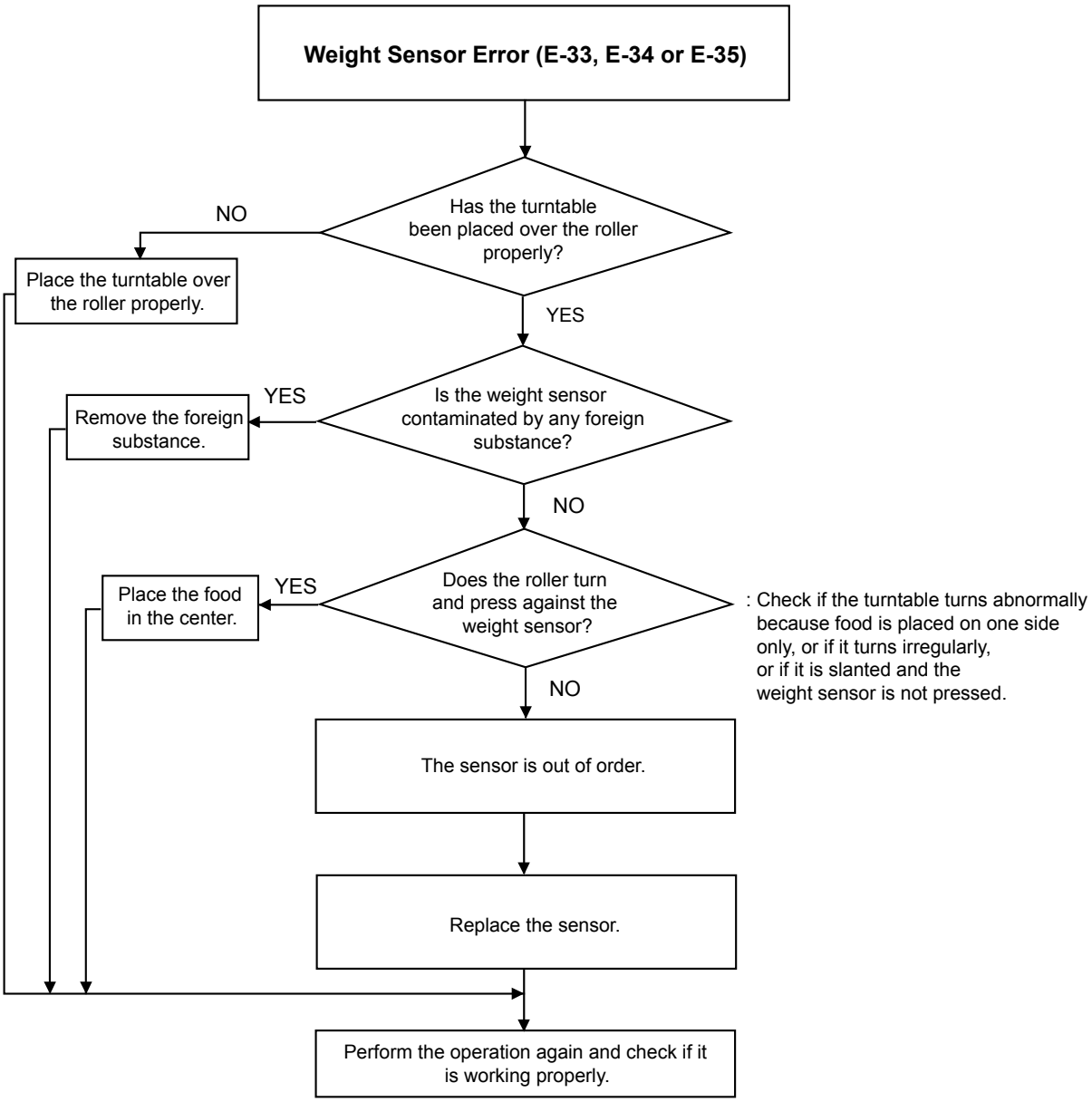
4-4-3 E-13, E-14, E-43, E-44, E-63


Sensor Max Time Error (E-13, E-14, E-43, E-44, E-63)
Does it heat up without placing food into it?
YES
Insert food and heat it again.
: Since heating without placing food into the oven may damage the product, take care.
NO
Does it heat with completely dried food?
YES
Place food with moisture into it and heat it again.
: Since heating completely dried food may burn the food, take care.
NO
Is any foreign substance on the sensor or is something acting as an obstacle in front of the sensor?
YES
Remove the an foreign substance or obstacle.
: If the sensor is contaminated by a foreign substance, it may fail to detect the humidity.
NO
The sensor is out of order.
Replace the sensor.
Perform the operation again and check if it is working properly.

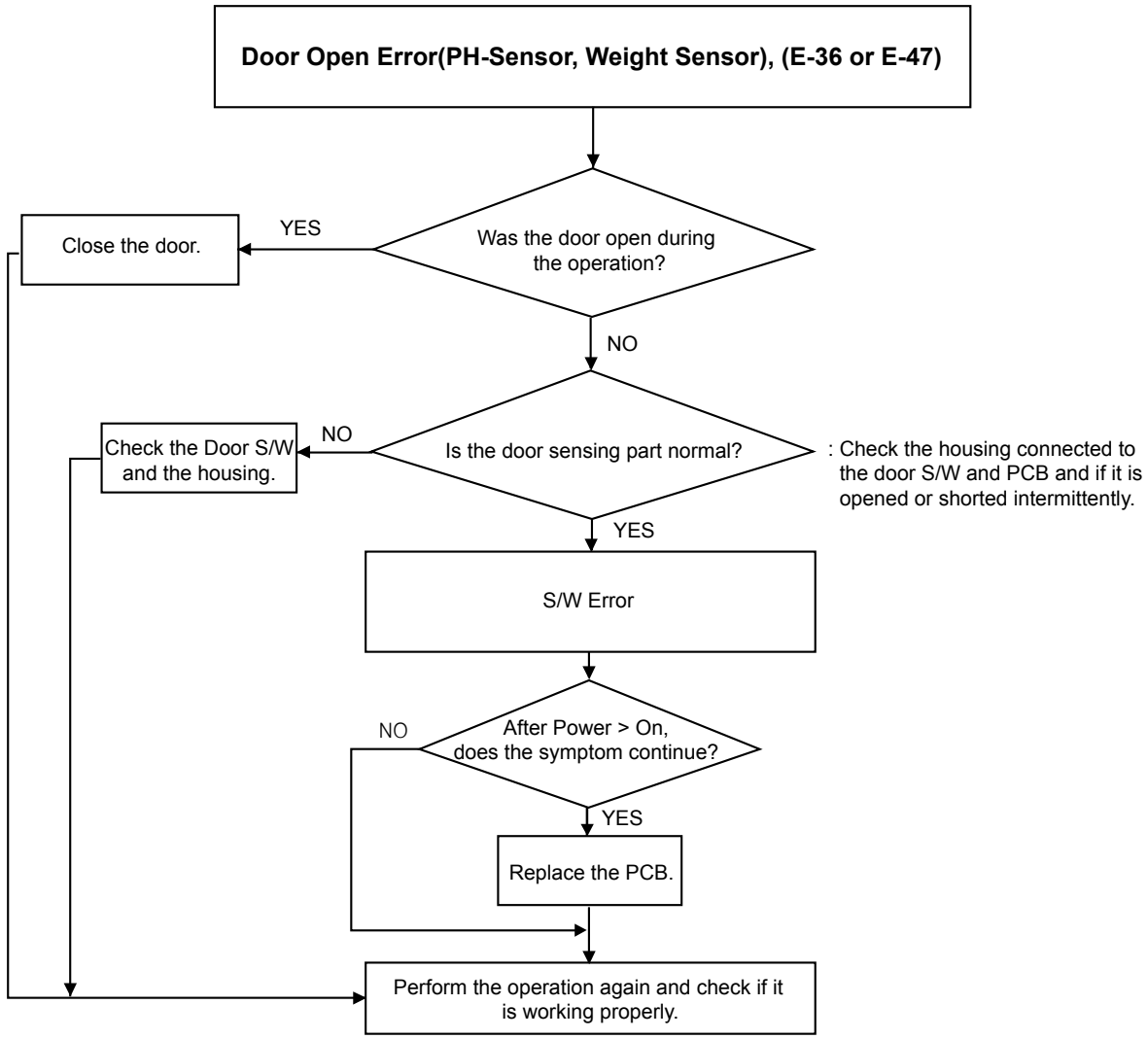
4-4-4 -SE-


Key Short Error (- SE -)
Is the key not recognized at all?
YES
NO
Is the key recognized intermittently?
YES
NO
Is a specific key not recognized?
YES
NO
The membrane is defective.
Replace the Control Panel.
S/W Error
After Power > On, does the symptom continue?
NO
YES
Replace the PCB.
Perform the operation again and check if it is working properly.
membrane
Connector

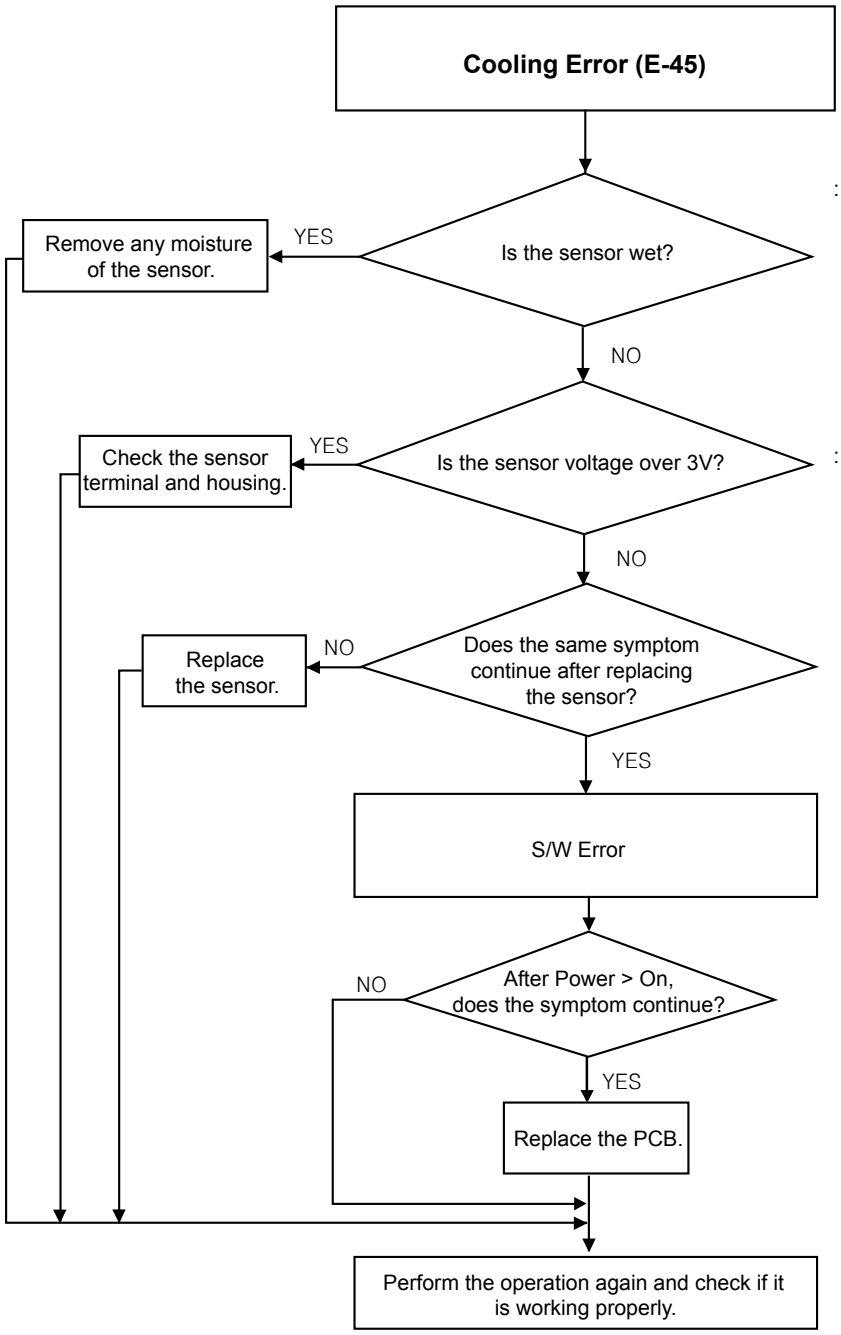
4-4-5 E-33, E-34 or E-35


Weight Sensor Error (E-33, E-34 or E-35)
Has the turntable been placed over the roller properly?
NO
Place the turntable over the roller properly.
YES
Is the weight sensor contaminated by any foreign substance?
YES
Remove the foreign substance.
NO
Does the roller turn and press against the weight sensor?
YES
Place the food in the center.
NO
: Check if the turntable turns abnormally because food is placed on one side only, or if it turns irregularly, or if it is slanted and the weight sensor is not pressed.
The sensor is out of order.
Replace the sensor.
Perform the operation again and check if it is working properly.

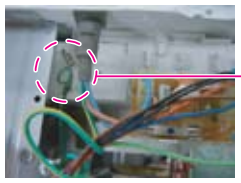
4-4-6 E-36 or E-47


Door Open Error(PH-Sensor, Weight Sensor), (E-36 or E-47)
Was the door open during the operation?
YES
Close the door.
NO
Is the door sensing part normal?
NO
Check the Door S/W and the housing.
: Check the housing connected to the door S/W and PCB and if it is opened or shorted intermittently.
YES
S/W Error
After Power > On, does the symptom continue?
NO
YES
Replace the PCB.
Perform the operation again and check if it is working properly.

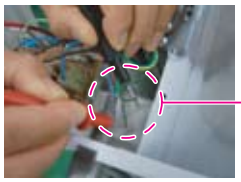
4-4-7 E-45



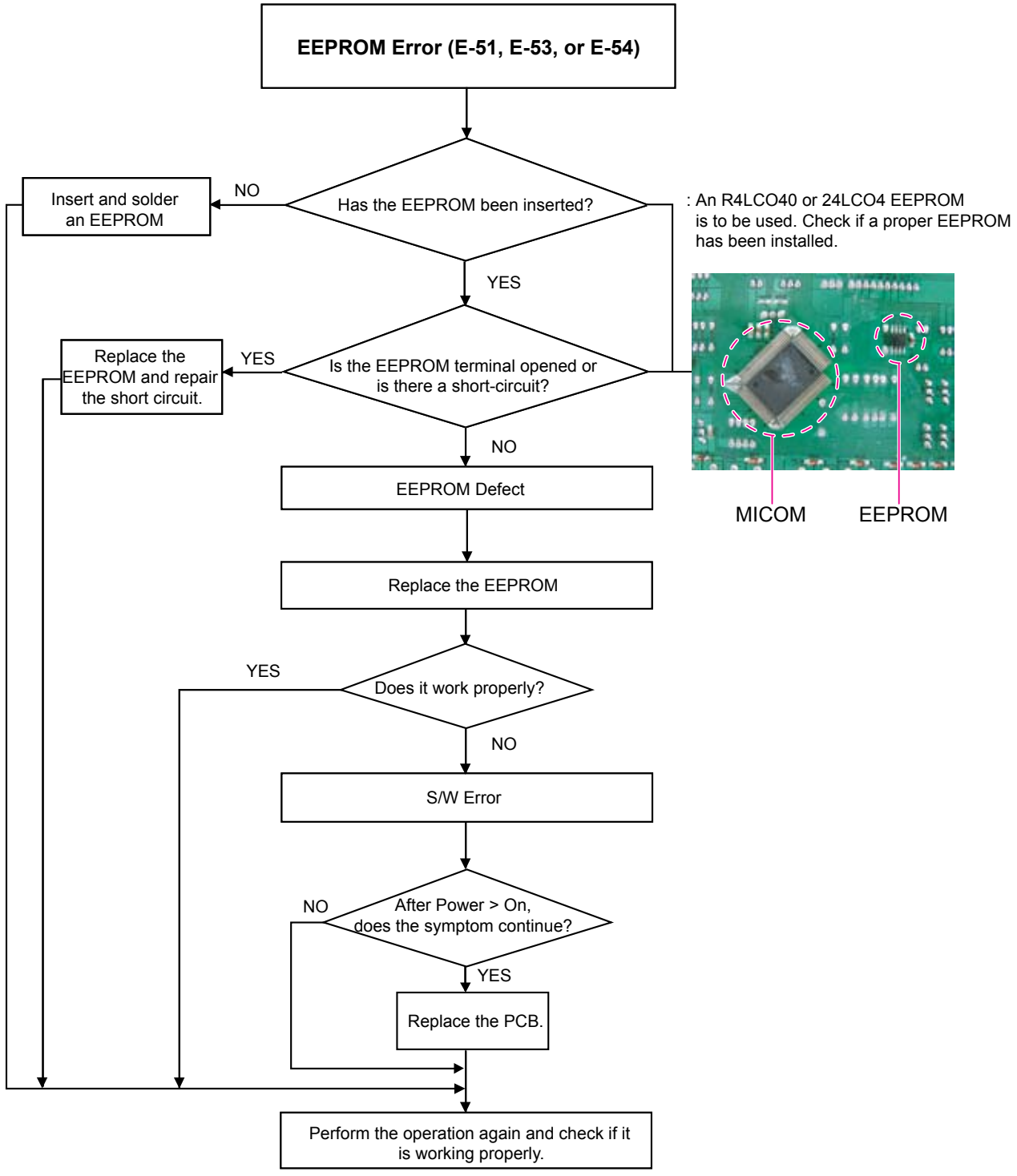
: To remove moisture from the sensor, open the door for 5 minutes.



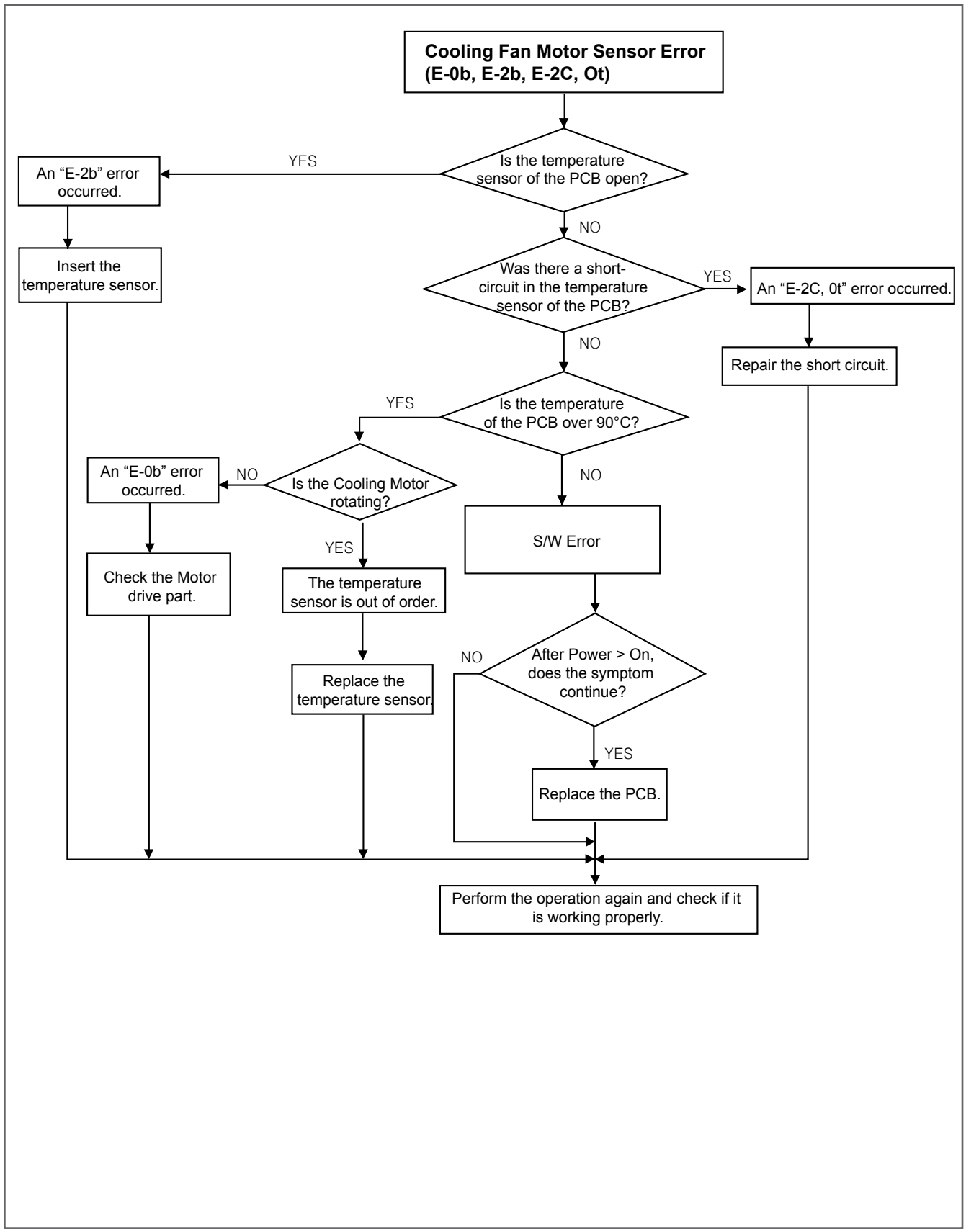
: Check if the GND and sensor terminal is maintained over 3V continuously during the initial cooking course using a multi-meter.



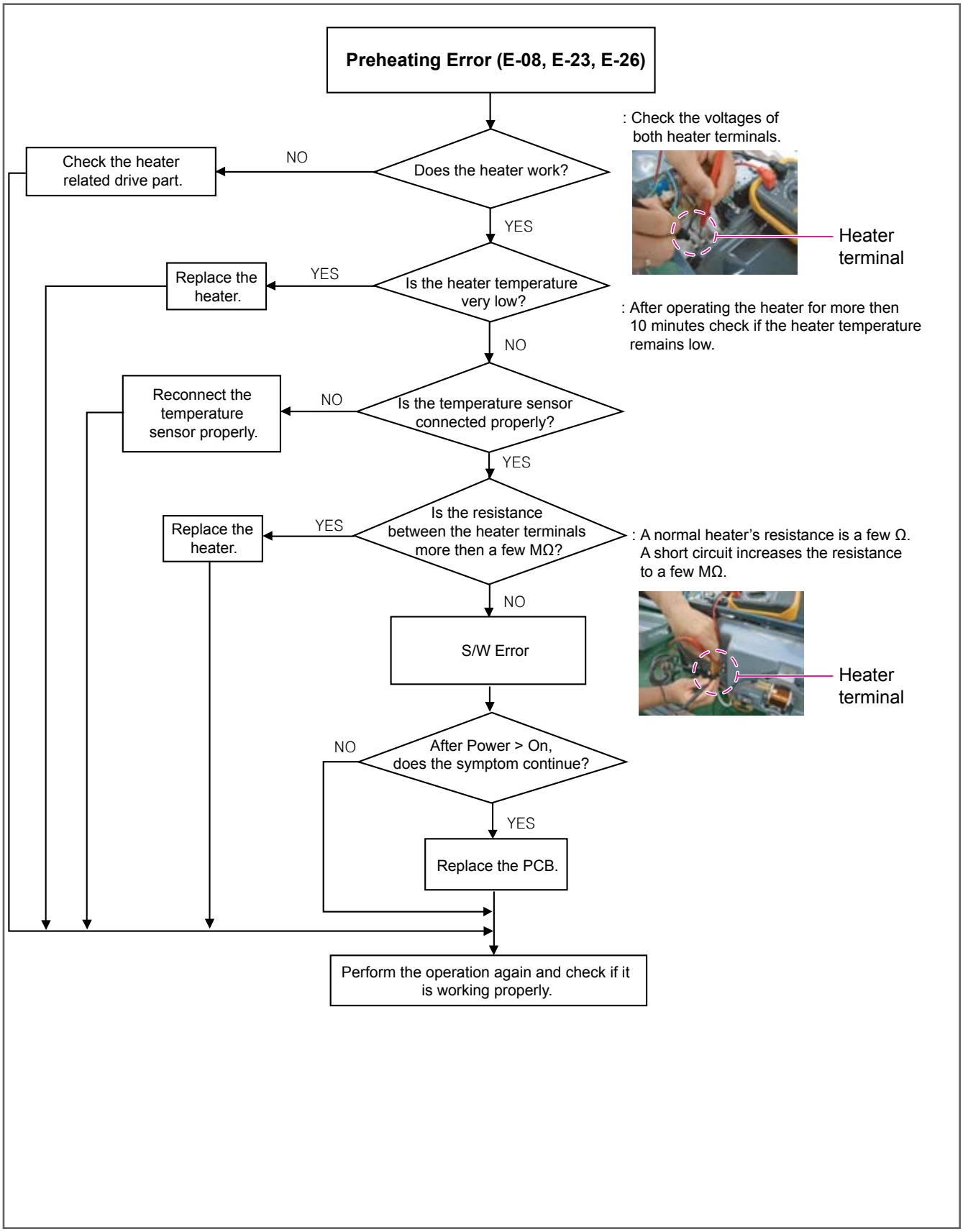
4-4-8 E-51, E-53 or E-54


EEPROM Error (E-51, E-53, or E-54)
Has the EEPROM been inserted?
NO
Insert and solder an EEPROM
YES
Is the EEPROM terminal opened or is there a short-circuit?
YES
Replace the EEPROM and repair the short circuit.
NO
EEPROM Defect
Replace the EEPROM
Does it work properly?
YES
NO
S/W Error
After Power > On, does the symptom continue?
NO
YES
Replace the PCB.
Perform the operation again and check if it is working properly.
: An R4LCO40 or 24LCO4 EEPROM is to be used. Check if a proper EEPROM has been installed.
MICOM
EEPROM

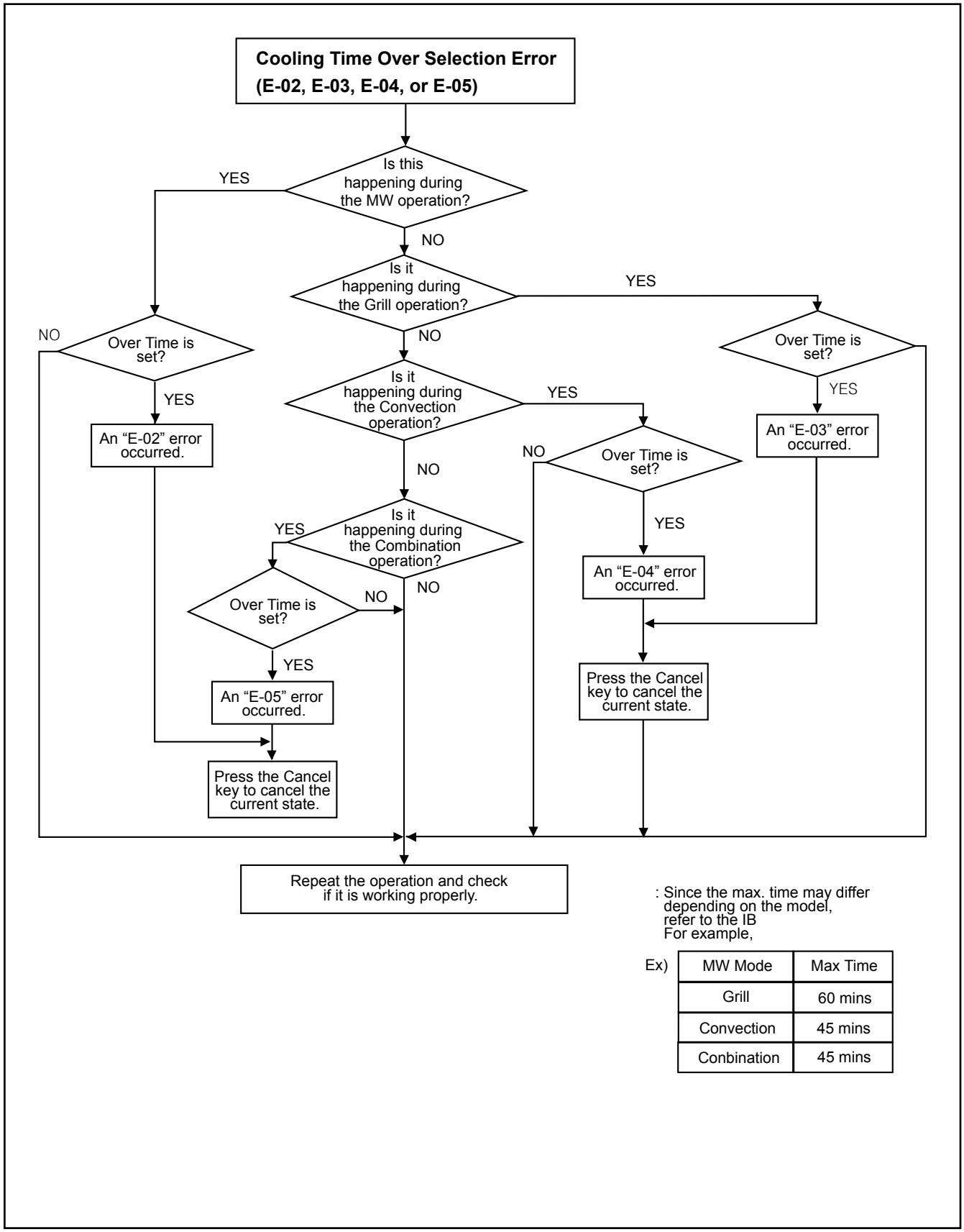
4-4-11 E-0b, E-2b, E-2C, 0t


Cooling Fan Motor Sensor Error
(E-0b, E-2b, E-2C, Ot)
Is the temperature sensor of the PCB open?
YES
An “E-2b” error occurred.
Insert the temperature sensor.
NO
Was there a short-circuit in the temperature sensor of the PCB?
YES
An “E-2C, 0t” error occurred.
Repair the short circuit.
NO
Is the temperature of the PCB over 90°C?
YES
NO
Is the Cooling Motor rotating?
NO
An “E-0b” error occurred.
Check the Motor drive part.
YES
The temperature sensor is out of order.
Replace the temperature sensor.
S/W Error
After Power > On, does the symptom continue?
NO
YES
Replace the PCB.
Perform the operation again and check if it is working properly.

4-4-12 E-23, E-26


Preheating Error (E-08, E-23, E-26)
Does the heater work?
NO
Check the heater related drive part.
YES
Is the heater temperature very low?
YES
Replace the heater.
NO
Is the temperature sensor connected properly?
NO
Reconnect the temperature sensor properly.
YES
Is the resistance between the heater terminals more then a few MΩ?
YES
Replace the heater.
NO
S/W Error
After Power > On, does the symptom continue?
NO
YES
Replace the PCB.
Perform the operation again and check if it is working properly.
: Check the voltages of both heater terminals.
Heater terminal
: After operating the heater for more then 10 minutes check if the heater temperature remains low.
: A normal heater's resistance is a few Ω. A short circuit increases the resistance to a few MΩ.
Heater terminal

4-4-13 E-02, E-03, E-04 or E-05

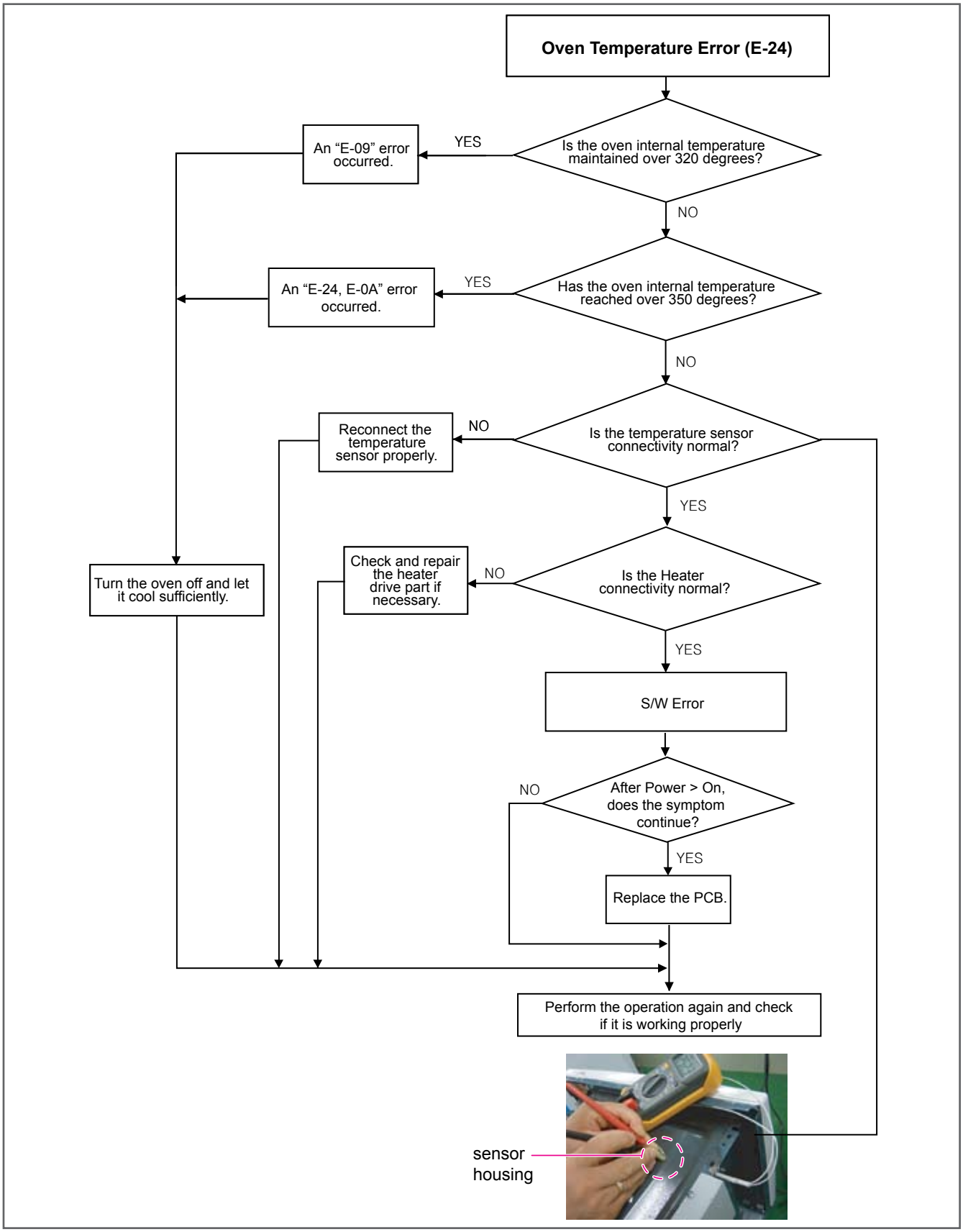


: Since the max. time may differ depending on the model, refer to the IB
For example,

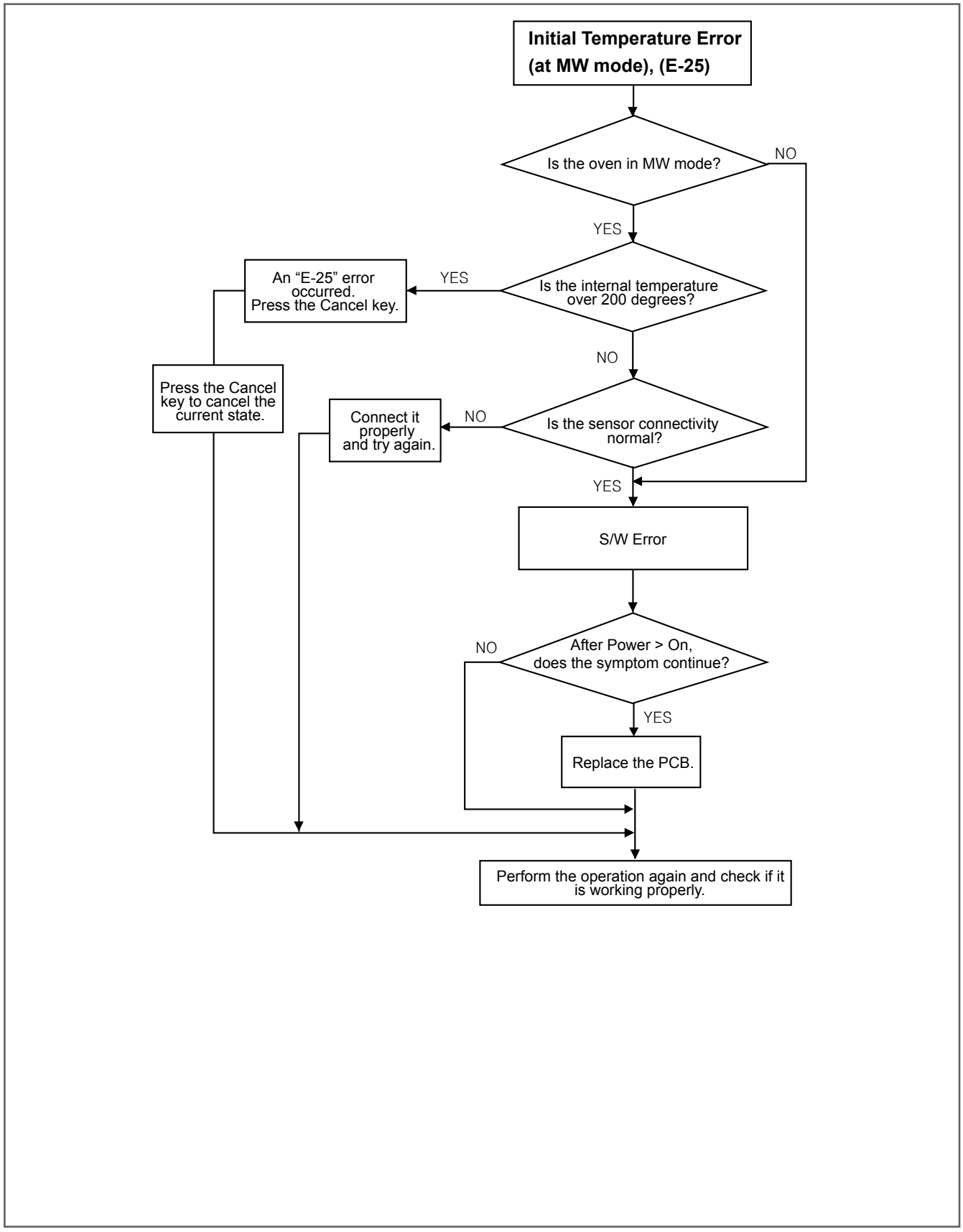
Ex)

MW Mode	Max Time
Grill	60 mins
Convection	45 mins
Conbination	45 mins

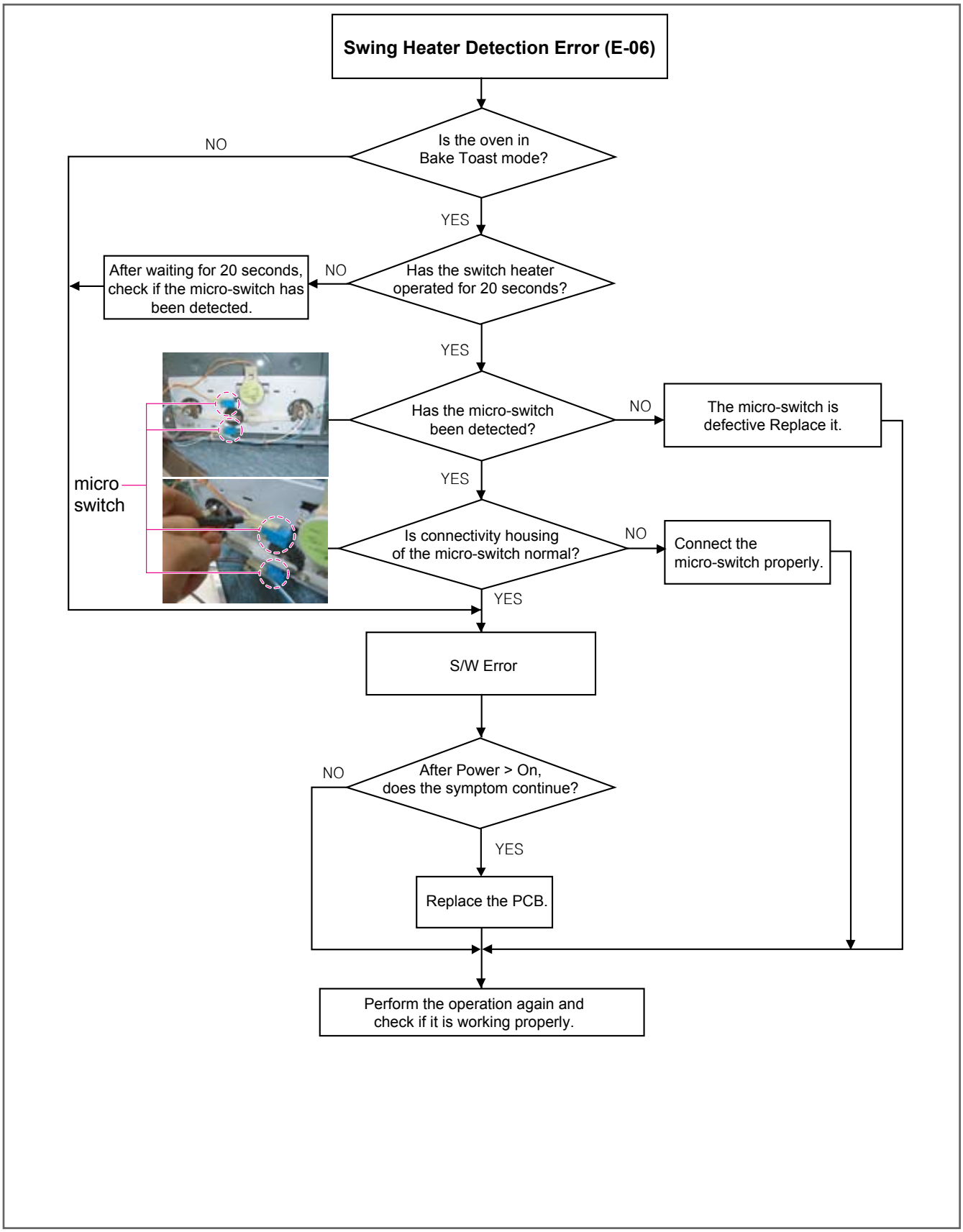
4-4-14 E-24


Oven Temperature Error (E-24)
Is the oven internal temperature maintained over 320 degrees?
YES
An “E-09” error occurred.
NO
Has the oven internal temperature reached over 350 degrees?
YES
An “E-24, E-0A” error occurred.
NO
Is the temperature sensor connectivity normal?
NO
Reconnect the temperature sensor properly.
YES
Is the Heater connectivity normal?
NO
Check and repair the heater drive part if necessary.
YES
Turn the oven off and let it cool sufficiently.
S/W Error
After Power > On, does the symptom continue?
NO
YES
Replace the PCB.
Perform the operation again and check if it is working properly
sensor housing

4-4-15 E-25


Initial Temperature Error
(at MW mode), (E-25)
Is the oven in MW mode?
NO
YES
Is the internal temperature over 200 degrees?
YES
An “E-25” error occurred.
Press the Cancel key.
NO
Is the sensor connectivity normal?
NO
Connect it properly and try again.
Press the Cancel key to cancel the current state.
YES
S/W Error
After Power > On, does the symptom continue?
NO
YES
Replace the PCB.
Perform the operation again and check if it is working properly.

4-4-16 E-06


Swing Heater Detection Error (E-06)
Is the oven in Bake Toast mode?
NO
YES
Has the switch heater operated for 20 seconds?
NO
After waiting for 20 seconds, check if the micro-switch has been detected.
YES
Has the micro-switch been detected?
NO
The micro-switch is defective Replace it.
YES
micro switch
Is connectivity housing of the micro-switch normal?
NO
Connect the micro-switch properly.
YES
S/W Error
After Power > On, does the symptom continue?
NO
YES
Replace the PCB.
Perform the operation again and check if it is working properly.

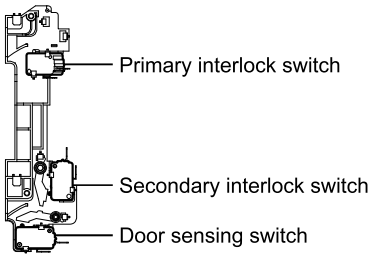
4-4-17 If oven malfunction

Oven does not operate.

***Inspection method**

Caution
1. Be careful of high voltage circuits.
2. Discharge high voltage capacitor.

Is Fuse OK?
- NO → Is Primary interlock switch normal?
  - NO → Make sure to inspect the power relay after replacing primary interlock switch, secondary interlock switch and door sensing switch.

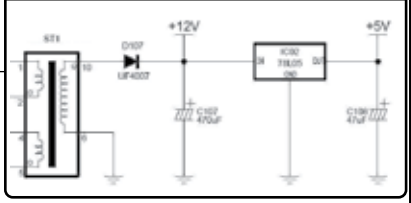


< Latch switch assembly >

  - YES → Is Power Relay normal?
    - NO → Replace Relay
- YES

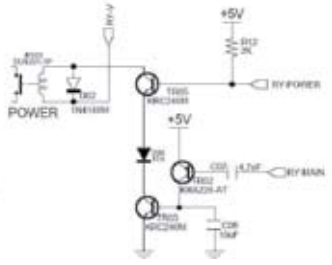
Is the magnetron temperature switch normal?
- NO → Replace switch
  - NO → Check a fan motor after replacing switch
- YES

Is SMPS power supply cirduit normal?
- NO → Do check power supply circuit
  - NO → Power supply circuit check point



- YES

Is the IC01 output of PCB normal?
- NO → Do check Relay control circuit
  - NO → Relay control circuit check point



- YES

Checking high voltagecircuts

Is high voltage dioed normal?
- NO → Is high voltage dioed normal?
  - NO → In case any of high voltage parts is damaged, check all parts related to high votlage.
  - YES → Is high voltage capacitor normal?
    - NO → In case any of high voltage parts is damaged, check all parts related to high votlage.
    - YES → Is magnetron normal?
      - NO → In case any of high voltage parts is damaged, check all parts related to high votlage.

4-4-18 If button malfunction

Buttons of the control panel do not work.

***Inspection method**

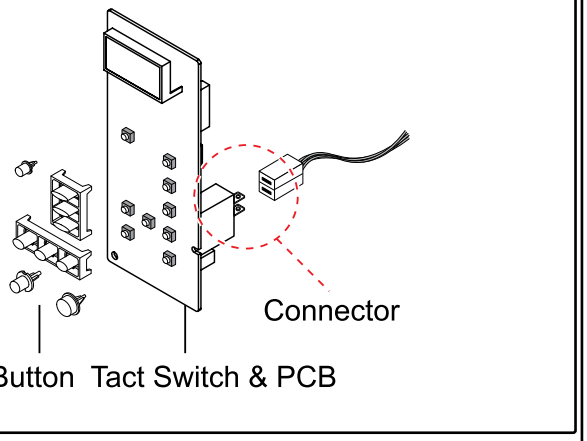
Are button pressed in the correct order?

NO → Refer to User Manual

YES

Is the connector of the control panel normal?

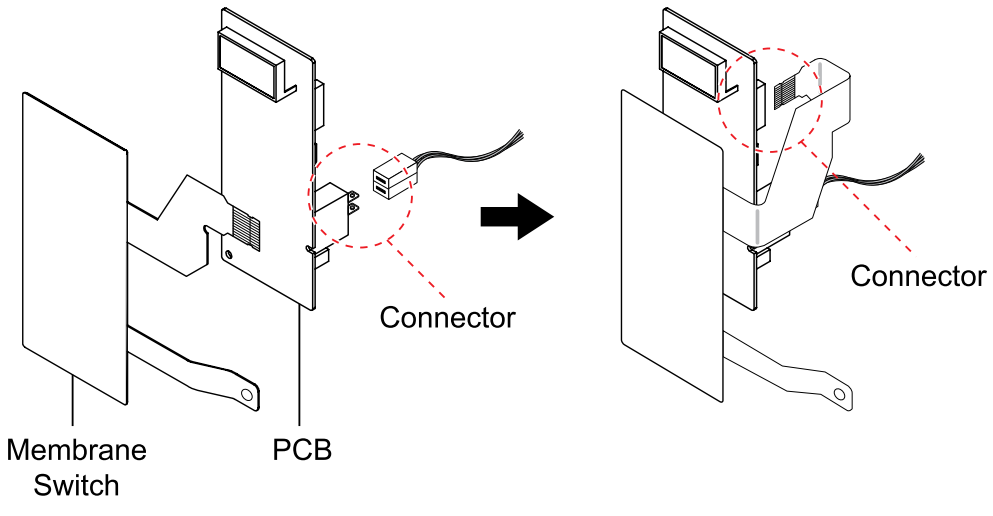
NO → Tact type



YES

Replace PCB.

Menbrane type



4-4-19 If food is not heated even though an oven works

Food is not heated even though an oven works.

***Inspection method**

Is the latch switch operating normally?

NO

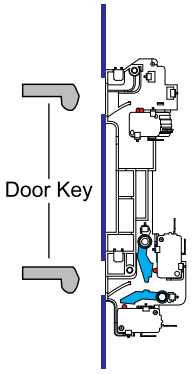
Method to control latch switch

YES

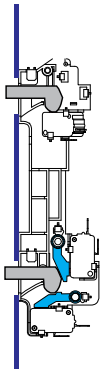
Checking high voltage circuits

Refer to "Checking high voltage circuits" on the previous page.

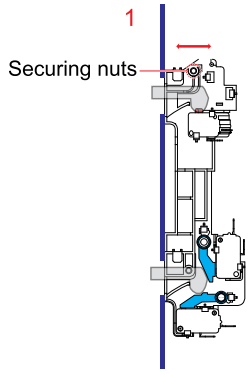
*Door open



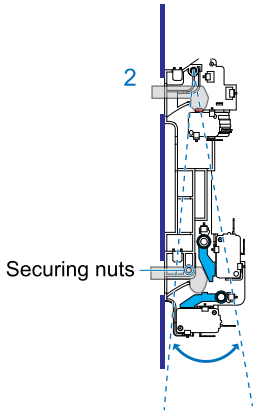
*Door closed



Method to control latch switch

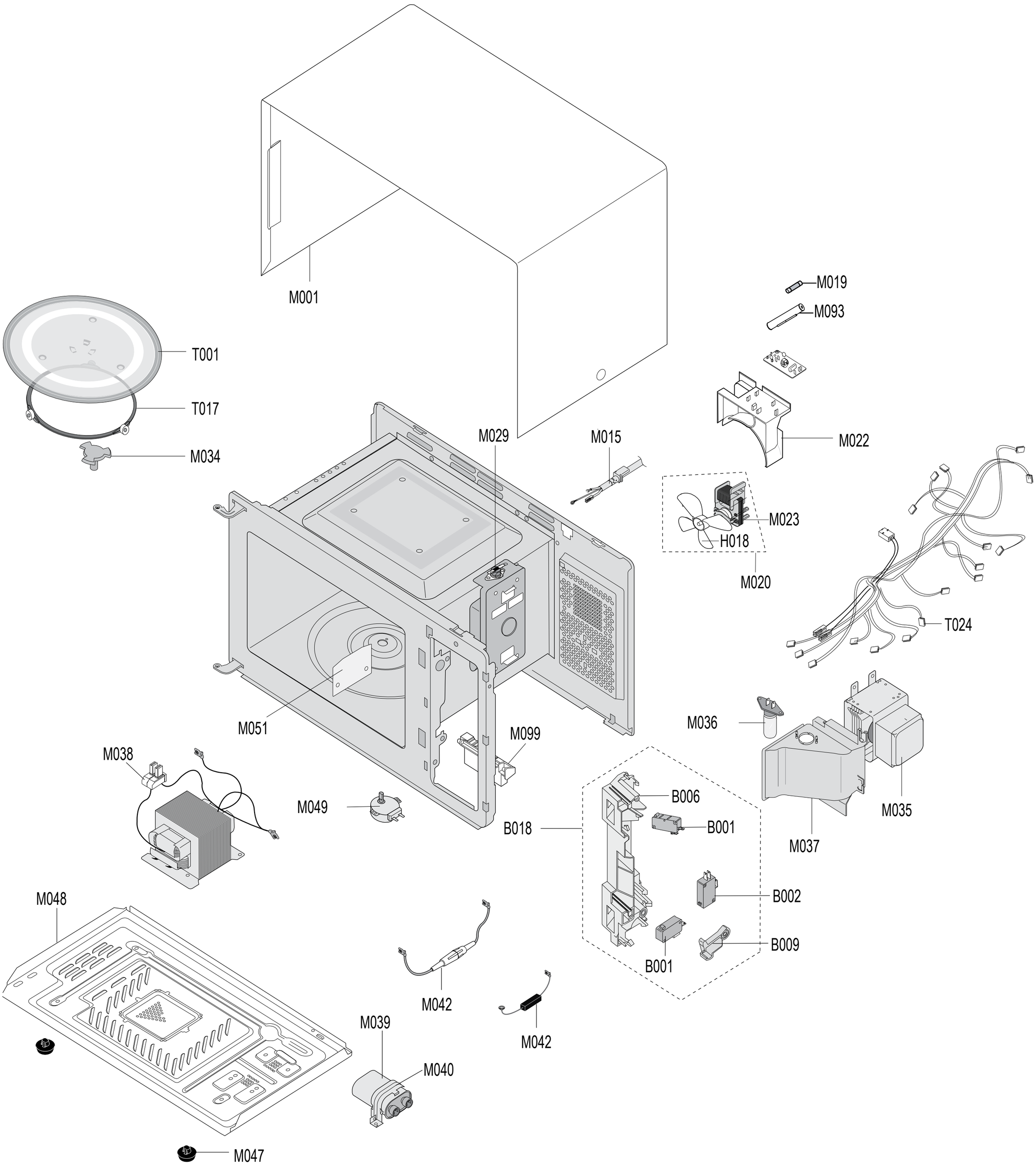


1. Loosenly tighten the nuts to check whether the primary interlock switch works by slightly moving latches to right and left.
Then firmly tighten nuts.



2. Loosenly tighten the nuts to check whether the secondary interlock switch and door sensing switch works by slightly moving latches to right and left.
Then firmly tighten nuts.

5-1 Exploded Views

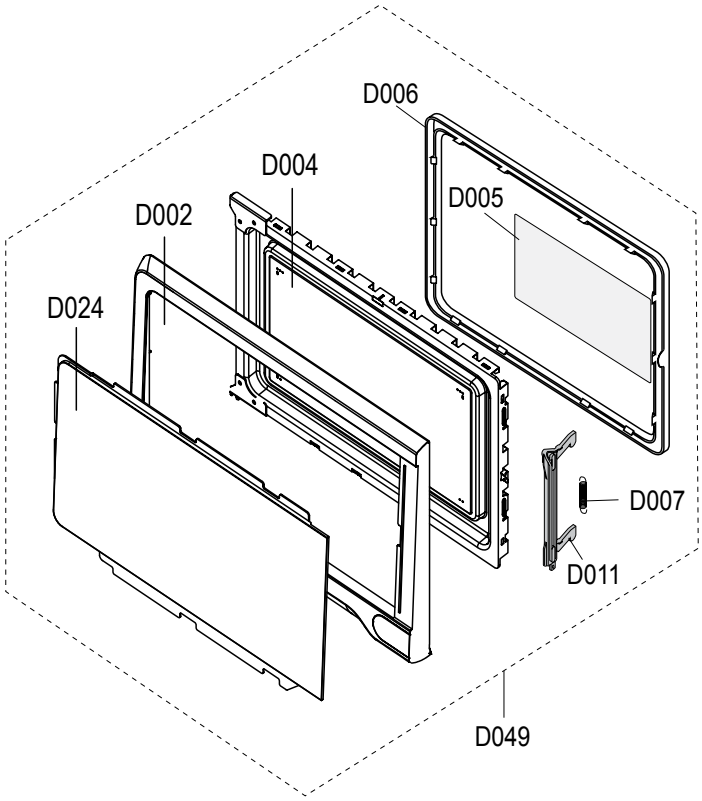


5-2 Main Parts List

(S.N.A : SERVICE NOT AVAILABLE)

No.	Code No.	Description	Specification	Q'ty	SA/ SNA	Remark
B001	3405-001034	SWITCH-MICRO	125/250VAC,16A,200GF,SPST-N	2	SA	-
B002	3405-001033	SWITCH-MICRO	125/250VAC 16A,200GF,SPSTNC	1	SA	-
B006	DE72-00138B	BODY-LATCH	NC2000(0.6/0.8/1.2),PP(FH44N)	1	SA	-
B009	DE66-00088B	LEVER SWITCH	-,POM,-,-,-,-,-,-	1	SA	-
B018	DE96-00115H	ASSY BODY LATCH	JEM25BF/SM3 BUTTON	1	SA	-
H018	DE31-90057A	BLADE-FAN	PP,T1.5,-,3RD-W,-,-,-	1	SA	-
M001	DE64-01177D	PANEL-OUTER	MS83HCE-S/XSA,SECC,T0.5,-,-,	1	SA	-
M015	DE96-00379G	ASSY POWER CORD	UL,AMERICA,125V/13A,1500	1	SA	-
M019	3601-001197	FUSE-CARTRIDGE	250V,15A,SLOW-BLOW,CERAMI	1	SA	-
M020	DE96-00086B	ASSY-MOTOR FAN	SMF-NC2UA,120V60Hz,2450RP	1	SA	-
M022	DE71-00148A	COVER-BLOWER	PP,T1.5NTR MW850WA NC2000	1	SA	-
M023	DE31-10184F	MOTOR-FAN	SMF-NC2UA,-,-,120V60Hz,-,-,250	1	SA	-
M029	DE47-20173A	THERMOSTAT	PW-2N(90/60)30,187Y,250V7.5A,	1	SA	CVT TOP
M034	DE67-00140A	COUPLER	PPS,(ESS840),3G,BRN,NEW	1	SA	-
M035	OM75S(31)ESGN	ASSY-MGT		1	SA	-
M036	4713-001102	LAMP-INCANDESCENT	125V,-,25W,TRP,-,-,25x	1	SA	-
M037	DE71-60457C	COVER-AIR	3RD-0.7(BTM),PP(FB53 G30),-,-,	1	SA	-
M038	DE26-00135B	TRANS H.V	SHV-UT820B,120V,60HZ,2140V/3.4	1	SA	-
M039	2501-001035	C-OIL	860nF,2100V,BK,35x54x75,20mm	1	SA	-
M040	DE61-00139A	BRACKET-HVC	NC2000,SECC,T0.8,-,-,-,0.6/0	1	SA	-
M042	DE59-00002A	DIODE-H.V	2CL4512H,450mA, 13KV,MWO ALL,	1	SA	-
M048	DE80-00023A	BASE PLATE	SGCC T0.6 MW850WA NC2000	1	SA	-
M049	DE31-10154A	MOTOR SYNCHRONOUS	M2HJ49ZR02,ST-16,50/60	1	SA	-
M051	DE71-00151A	COVER MGT	PP,T2,W54,L129,GE-WHTMW850WA	1	SA	-
M093	DE47-40025A	FUSE-HOLDER	KFSN-L-16,15A,NYLON#66,5G,-,	1	SA	-
M099	DE66-90113A	LEVER-DOOR	PP(TB53-GH41),T2.5,-,-,12g,NT	1	SA	-
T001	DE74-20102D	TRAY COOKING	GLASS T6 G643C-1 3RD-0.6	1	SA	-
T017	DE97-00193B	ASSY-GUIDE ROLLER	NC2000 0.6,T2*P1198(14	1	SA	-
T024	DE96-00696A	ASSY-WIRE HARNESS	AMW784W/XAO,120V 60HZ	1	SA	-

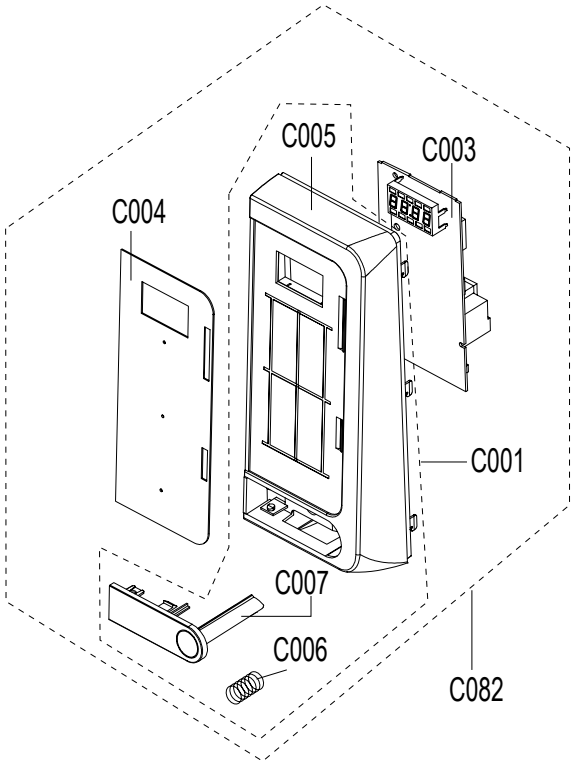
5-3 Door Parts List



(S.N.A : SERVICE NOT AVAILABLE)

No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
D002	DE64-01989B	DOOR-A	MW71E/MW73E,ABS,-,-,-,-,SILVER	1	SA	-
D004	DE94-00351B	ASSY DOOR E	MW850WA BLK COAT NC2000 0.8	1	SA	-
D005	DE01-00112A	FILM-DOOR	-,PET,-,L268,T0.15,W150,NTR,-,	1	SA	-
D006	DE64-40008B	DOOR-C	-,PP,CE745G,-,-,-,BLK,-	1	SA	-
D007	DE61-00198A	SPRING KEY	M1877,HSWR D6,23 1/4 T0.7	1	SA	-
D011	DE64-00210A	DOOR-KEY	NC2000 0.6/0.8/1.2 PP BLACK	1	SA	-
D024	DE64-01990A	SCREEN-DOOR(B)	MW73E,MW71E,SAN,-,-,-,-,B	1	SA	-
D049	DE94-01762J	ASSY DOOR	AMW83E-SB/XAP,-,VIC.SILVER,GAI	1	SA	-

5-4 Control Parts List



(S.N.A : SERVICE NOT AVAILABLE)

No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C001	DE94-01836B	ASSY CONTROL PANEL	GW73E-SB/GEN,VIC.SILV	1	SA	-
C003	RAS-SM3L-127	ASSY PCB PARTS	AMW784W/XAP,SMPS,1210V60H	1	SNA	-
C004	DE34-00309R	SWITCH MEMBRANE	AMW83E-WB/XAP,-,-,PET,-,	1	SNA	-
C005	DE64-01991C	CONTROL-PANEL	GW73E-SB/GEN,ABS,-,-,-,-,V	1	SA	-
C006	DE61-70076A	SPRING-BUTTON	-,HSWR,PI0.6,PI0.6,-,-,-,-	1	SA	-
C007	DE64-01993B	BUTTON-PUSH	MW71E-S/GW71E-S,ABS,-,-,SILV	1	SA	-
C082	DE94-01881B	ASSY CONTROL BOX	AMW83E-SB/XAP,120V60HZ,	1	SNA	-

5-5 Standard Parts List

(S.N.A : SERVICE NOT AVAILABLE)

Level	Code No.	Description	Specification	Q'ty	SA/ SNA	Remark
1-1	6002-001250	SCREW-TAPPING	TH,+,2,M4,L8,Tin-Ni,SWRC18	1	SNA	OUT PANEL RIGHT
1-1	6002-001325	SCREW-TAPPING	TH,TORX,2S,M4,L12,ZPC(YEL)	2	SA	P.OUTER BACK BOTTOM
1-1	6006-001170	SCREW-ASSY TAPP	WS,TH,+,M4,L10,ZPC(YEL)	2	SA	P/C EARTH,PCB EARTH
1-1	6006-001176	SCREW-ASSY TAPT	WT,PH,+,M4,L8,ZPC(YEL)	1	SNA	BKT HVC
1-1	DE60-10051A	SCREW-TAP PH	-,-,MSWR,-,PH,M4,-,L6,-,-	1	SA	DRIVE MOTOR
1-1	DE60-10080A	SCREW-WASHER	-,-,-,-,M5,L12,-,2S,-,-	8	SA	HVT,MGT
1-1	DE60-10082I	SCREW-A	-,-,-,-,2S-4X10,FEFZY,-,-,-,-	10	SA	BASE PLATE,BODY LATCH,C.BOX,COVER AIR,COVER BLOWER,PANEL OUTER,TCO
1-1	DE60-30016A	NUT-FLANGE	M4,MSWR10,-,-,-,-,-,-,-	2	SA	FAN MOTOR
1-2	6002-000630	SCREW-TAPPING	PH,+,2S,M3,L8,ZPC(YEL),SWR	2	SA	PCB

6-1 PCB Diagrams

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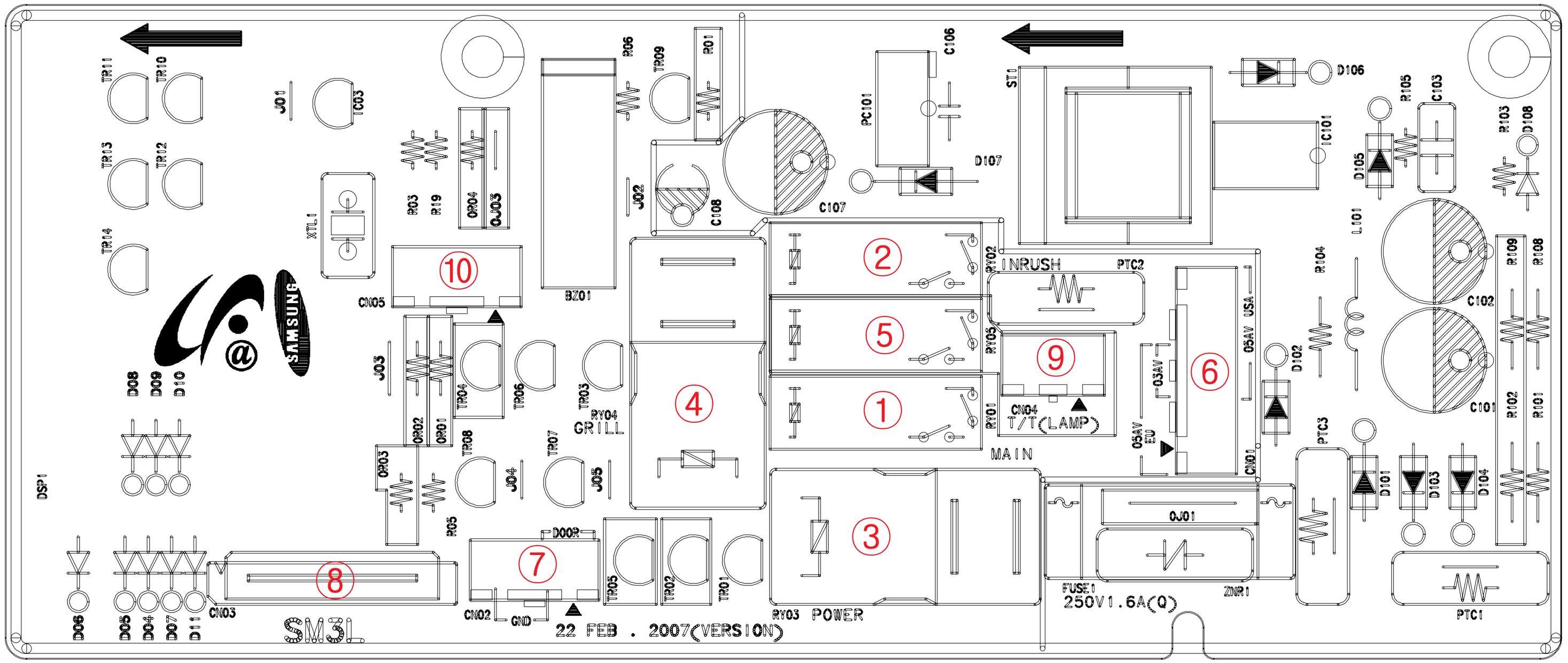

No.	Parts Number	Part Name	Function and Rule
1	RY01	Main Relay	Power Supply Relay
2	RY02	Inrush Relay	Inrush Electric Current Decrease Device
3	RY03	Power Relay	MWO Control Relay
4	RY04	Grill Heater Relay	MWO Grill Heater Control Relay
5	RY05	T/T Relay	T/T control Relay
6	CN01	A Terminal for Connecting with LVT	A Terminal for Connecting with LVT and SMPS Power Supply
7	CN02	A Terminal for Connecting with Relay	A Terminal for Connecting with Relay and SMPS Power Supply
8	CN03	A Terminal for Connecting with Connector	A Terminal for Connecting with Connector and SMPS Power Supply
9	CN04	A Terminal for Connecting with T/T LAMP	A Terminal for Connecting with T/T Lamp and SMPS Power Supply
10	CN05	A Terminal for Connecting with Humidity Sensor	A Terminal for Connecting with Humidity Sensor and SMPS Power Supply

6-2 PCB Diagrams

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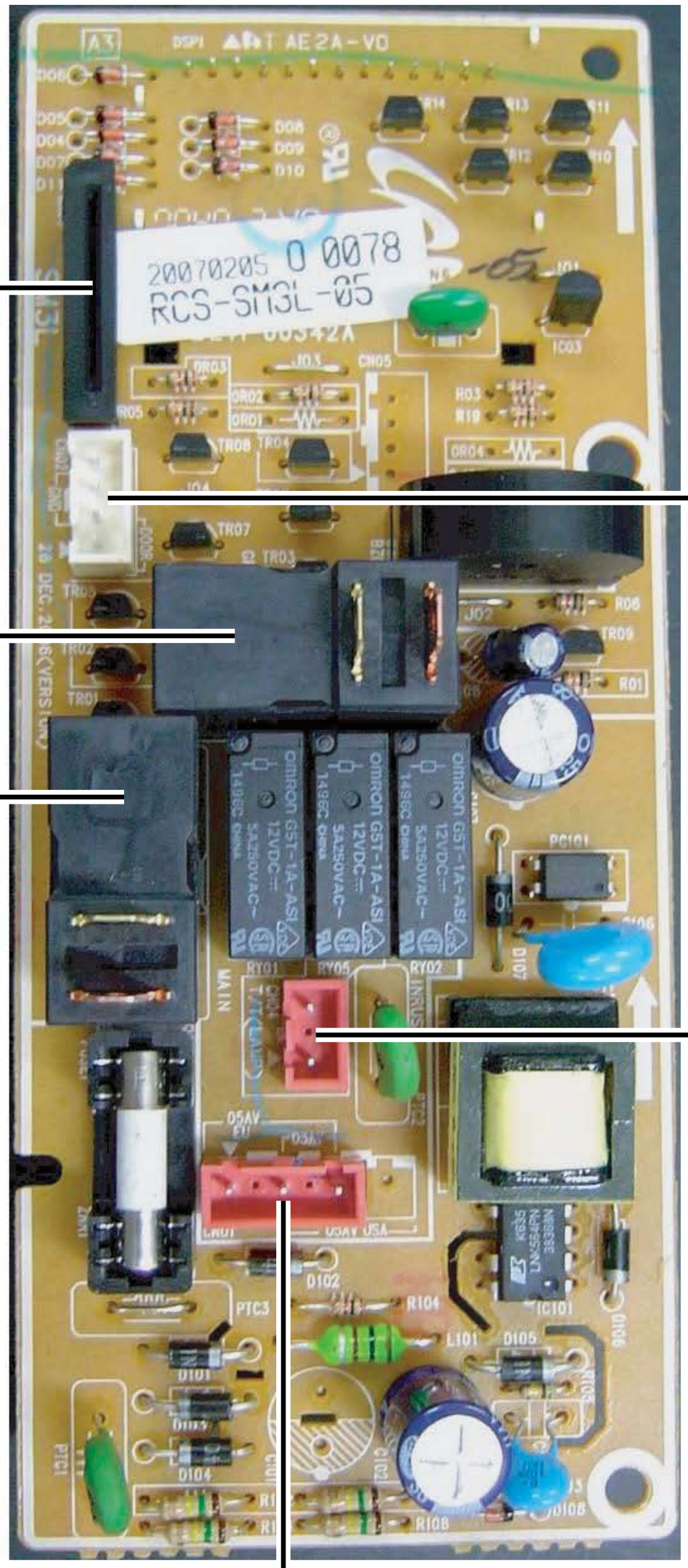
CN03
1) KEY OUTPUT1
2) KEY OUTPUT2
3) KEY OUTPUT3
4) KEY OUTPUT4
5) KEY OUTPUT5
6) KEY OUTPUT6
7) KEY OUTPUT7
8) KEY OUTPUT8
9) KEY INPUT1
10) KEY INPUT2
11) KEY INPUT3
12) KEY INPUT4
13) KEY INPUT5
14) ENCODER COMMON (ENCODER S/W MODEL)



CN02
1) DOOR SWITCH (12V)
2) GND
3) DOOR SWITCH (RY_12V)
4) GND

CN04
1) INRUSH CIRCUIT (MODEL OPTION)
2) NO PIN
3) T/TABLE OR LAMP RELAY (MODEL OPTION)

RY03
1) POWER RELAY CONTACT1(HVT POWER1)
AC POWER NEUTAL (AC220V ~ 240V)
2) POWER RELAY CONTACT2(HVT POWER2)

RY08
1) GRILL HEATER RELAY CONTACT1
2) GRILL HEATER RELAY CONTACT2

CN01
1) MONITOR S/W
2) NO PIN
3) AC POWER LIVE (AC220V ~ 240V)
4) NO PIN
5) MAIN RELAY
(Connect with Lamp, T/Table)
6) NO PIN
7) INRUSH CIRCUIT

7-1 Wiring Diagrams

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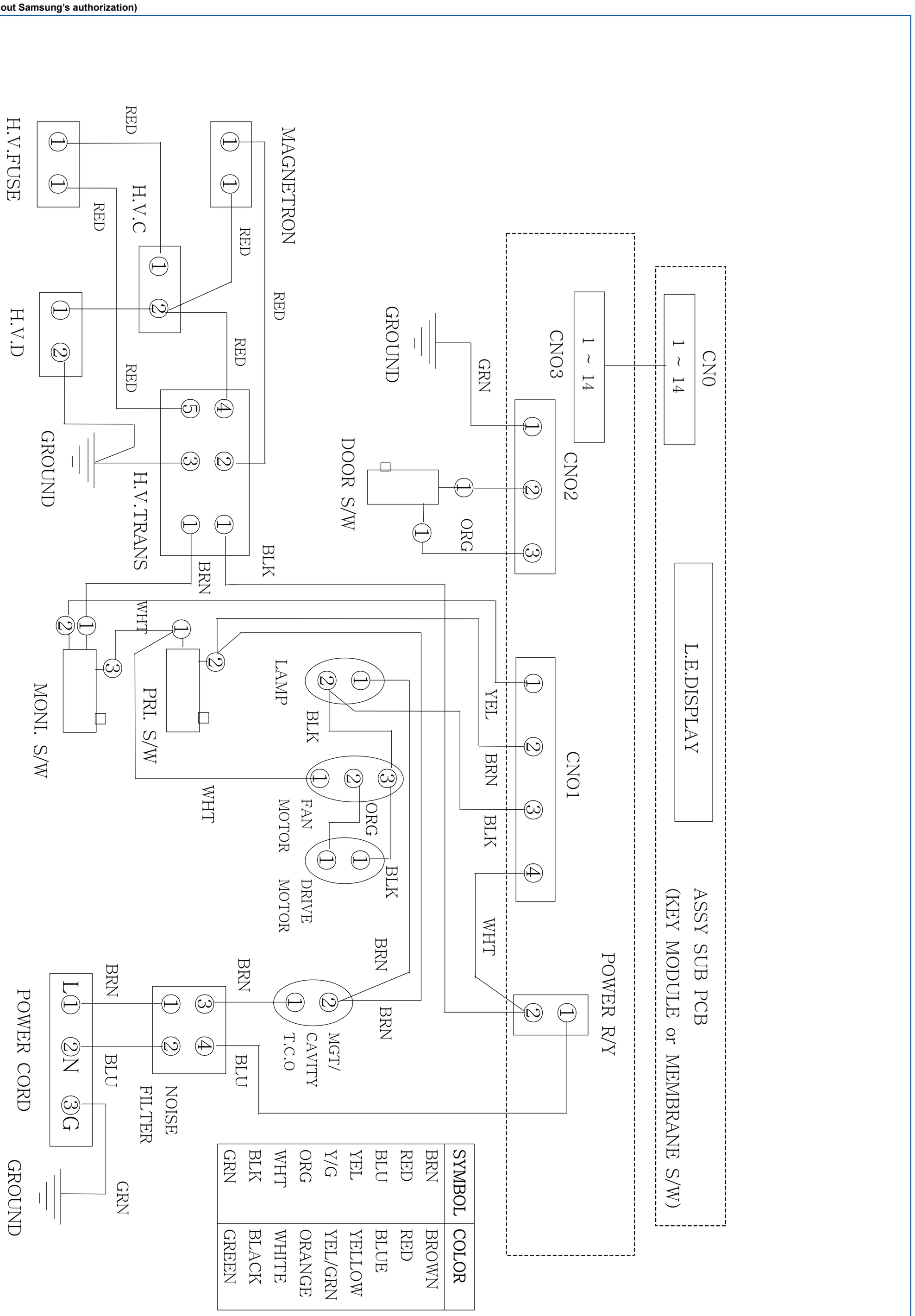

7-1 Wiring Diagrams

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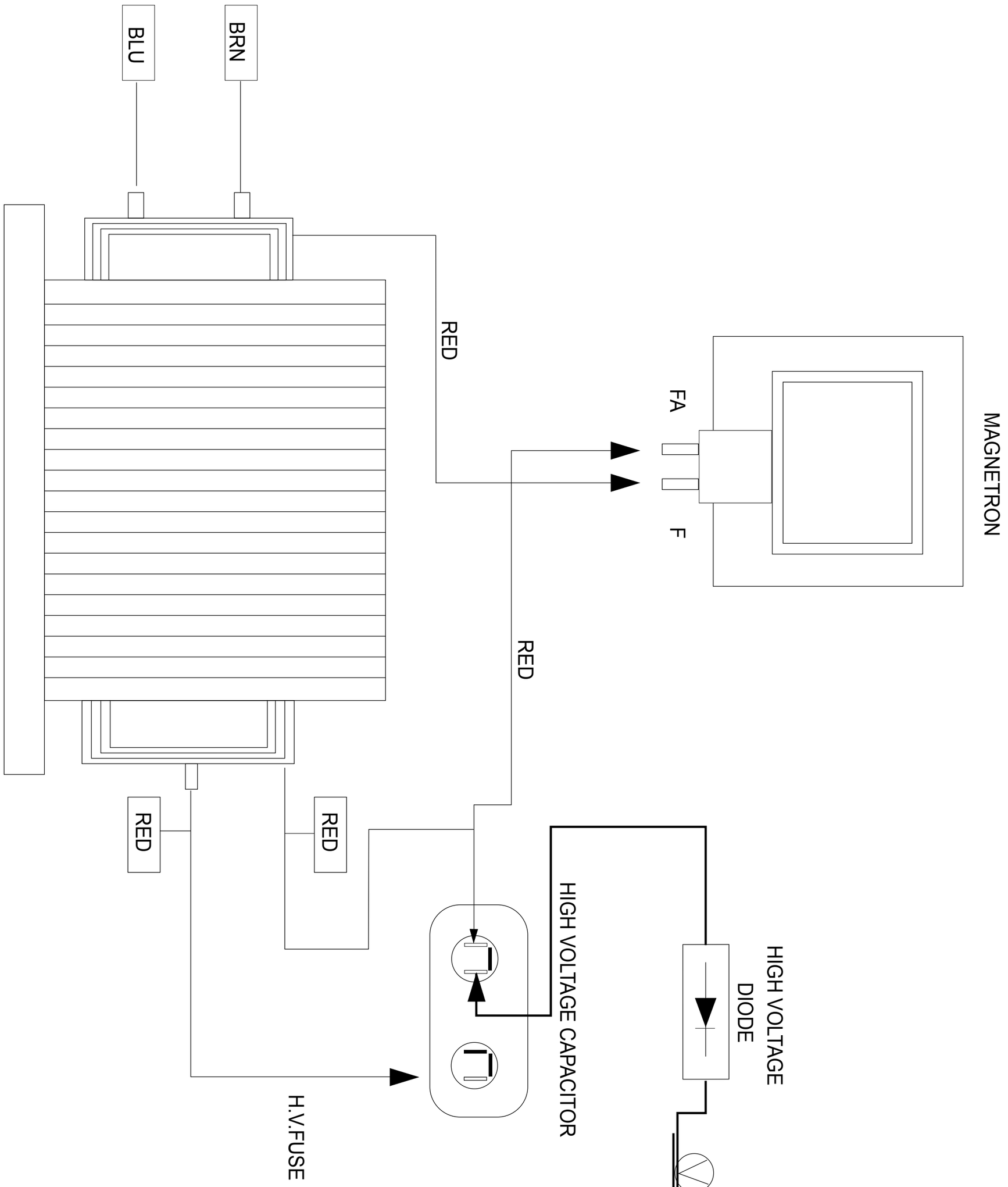

8-1 Schematic Diagrams

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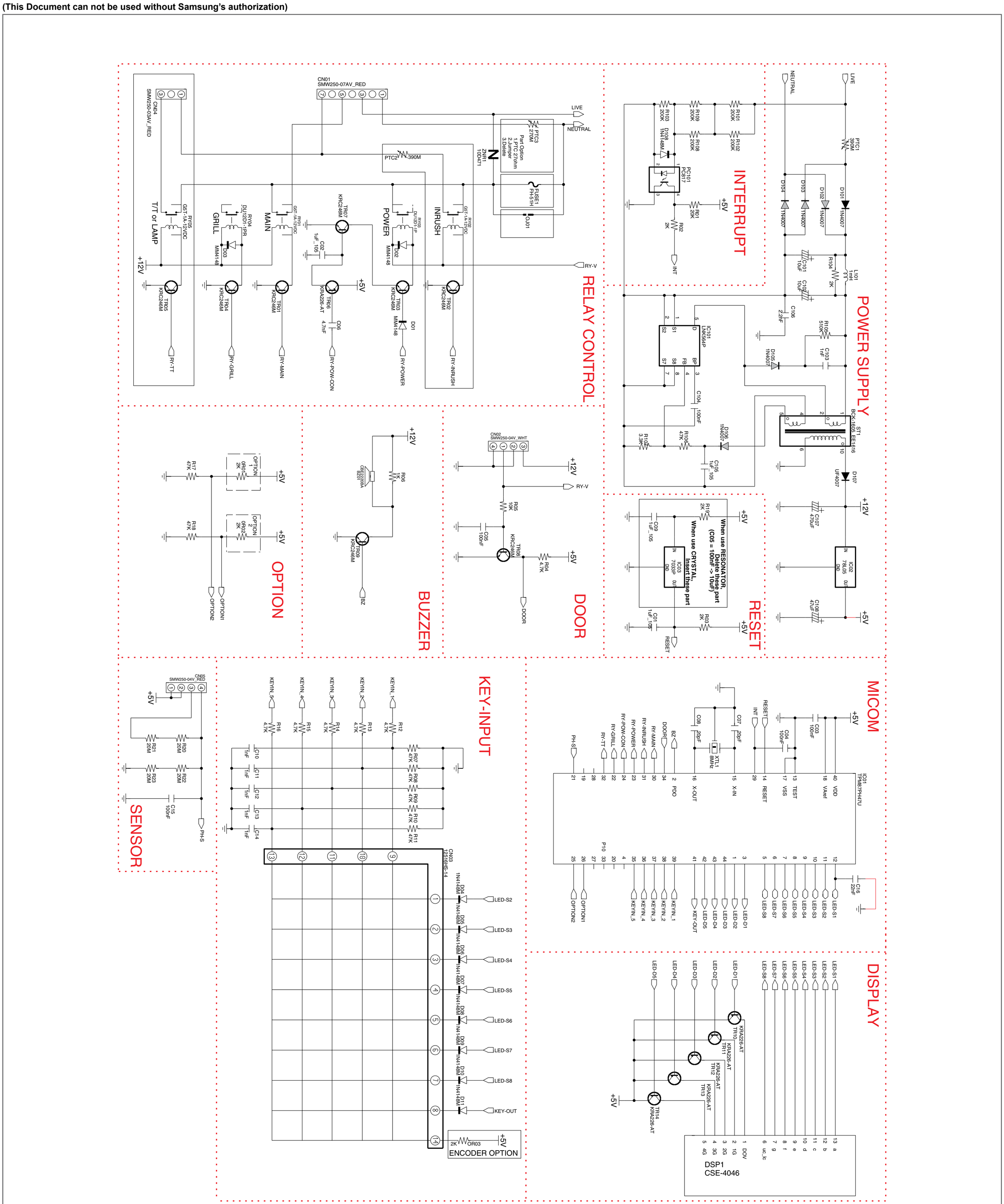

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